V.M.V.V Sangha's

V.M. K. S. R. Vastrad Arts Science And V.S Bellihal Commerce college, Hungund

Department of Botany Year 2022-2023

Project reports by B.sc VI semester students

Paper- II

Principal
Vijaya Mahantesh Krupaposhit
S.R.Vastrad Arts, Science & V.S.Bellihal
Commerce College, Hungund-587118

Sl.no	Reg. No.	Student Name	Project topic
1	S2041601	Afreenbanu	Water Purification
2	S2041603	Ajay	Water Purification
3	S2041608	Arjun	Water Purification
4	S2041609	Arsheennaaz	Water Purification
5	S2041611	Ashwini	Water Purification
	S2041615	Basavaraj	Water Purification
6	S2041625	Jadidhar	Water Purification
7	S2041628	Aishwarya	Water Purification
8	S2041634	Laxmi	Water Purification
9	S2041635	Mahadevi	Water Purification
10	S2041641	Manjula	Water Purification
11	S2041645	Muskan	Water Purification
12	S2041650	Pooja .B	Water Purification
13	S2041655	Prashant	Water Purification
14	S2041659	Priyanka	Water Purification
15	S2041663	Sahana	Water Purification
16	S2041671	Shilpa	Water Purification
17	S2041674	Shivu	Water Purification
18	S2041676	Shweta	Water Purification
19	S2041677	Siddalingesh	Water Purification
20	S2041680	Srujan	Water Purification

Botany
Head of the Department
V.M.K.S.R Vastrad Arts,Commerce A
Science College,Hungund Dist

V.M.K.S.R.VASTRADARTS, SCIENCE, &
V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: 31 Examination seat No: S2041671.

CERTIFICATE

This is to certify that Mr./Miss: Shilpa. F. Haddar of B.Sc 6th semester has satisfactorily completed the visit on **Water purification** of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner:

HOD

Botany
Head of the Department
V.M.K.S.R Vastrad Arts, Commerce And

1). 11/09/23

2). .....

FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

REPORT

1. INTRODUCTION

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- Aeration are to eliminate unneeded dissolved gases such as (CO_2, H_2S,NH_3).
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- Coagulation is the removal of turbidity from the water.
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- Disinfection is to destroy pathogens within a practicable period of time.

- Water distribution is to satisfy the water requirements for a combination of domestic, commercial, industrial and fire-fighting purposes.

  After water passes or flowing through all distinctive features, it's collected into water tank and ready to be supply to houses area.

2. OBJECTIVE

The objectives of visiting the water treatment plant are:-

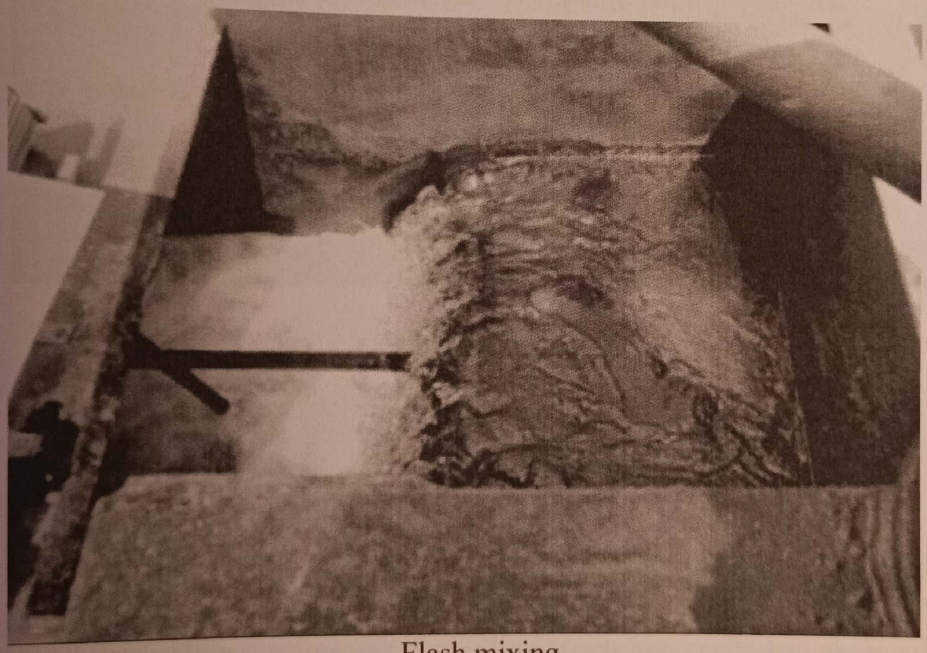
- To study the types of water treatment plant used.
- To study the process of water treatment.

3. WATER TREATMENT PROCESS

i. COLLECTION:-
The raw water which is supplied to the water treatment plant comes from periyar river.

ii. COAGULATION:-
The raw water is first treated with chemical coagulant alum. The dose of alum varies depending upon the turbidity, color, temperature & pH of the water.

iii. FLASH MIXING:-
Treated water is then subjected to violent agitation in a mixing chamber for a few minutes. This allows quick and rapid dissemination of alum throughout the bulk of the water.



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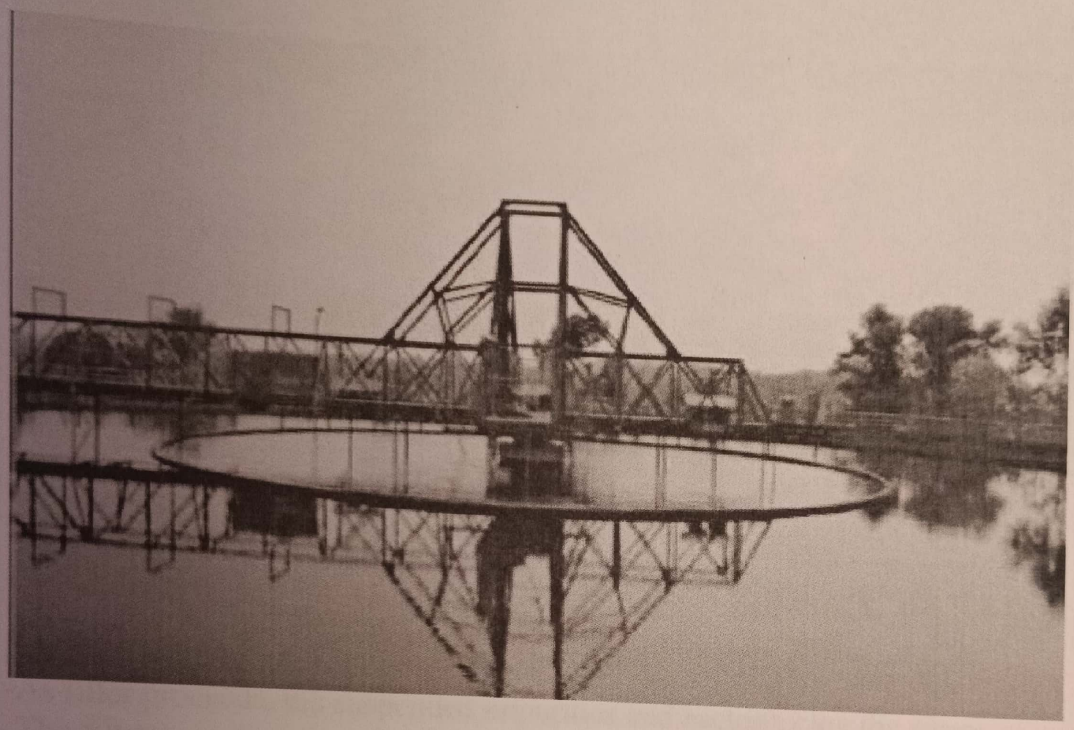
iv. FLOCCULATION:-

This phase involves a slow and gentle stirring of the treated water in a flocculation chamber. The mechanized type of rotor is used. This causes the formation of thick copious white flocculent precipitate. The thicker the precipitate is, the higher is the settling velocity.



Clariflocculator

v. SEDIMENTATION:-

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vi. FILTERATION:-

-Each filter unit has 6 sand beds – coarse pebble, fine pebble, coarse gravel, fine gravel, coarse sand, fine sand.

-The thickness of sand bed is 110 cm.

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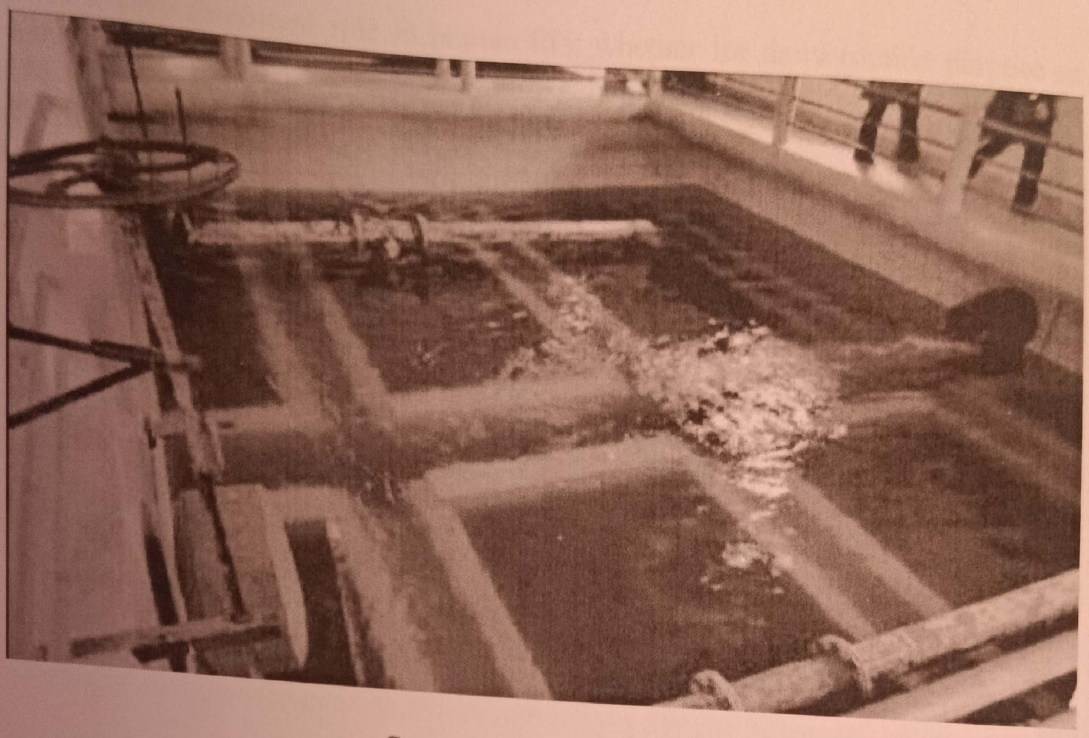
-Sandfilters getting dirty and beginning to lose efficiency approaching 7-8 feet needing, backwashing.



Sand filtration bed

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viii. DISINFECTION :-

-This is the last step before storage and distribution of this water.
-The process used is **chlorination.**
-The chlorine gas is used for effective disinfection.

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-We have visited the reservoir where the purified water was stored.
-From there it was supplied to various parts of Ernakulam and Aluva.

4. CONCLUSION

Water plays a very important role in human life, whether for daily routine purpose or human health. This field visit gave us the knowledge about the purification of water on large scale and made us aware about the quality of water since it may affect the human health especially. Also the trip made us realized that it is not easy to supply the water directly from the main supply to the people. Thus, thanks to the responsible party and the workers who invested in this project to ensure the health and convenience of the people in Aluva and Ernakulam and the faculties for planning this event smoothly.

V.M.K.S.R.VASTRADARTS, SCIENCE,&
V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No:50 Examination seat No:S2041680

CERTIFICATE

This is to certify that Mr./Miss:Srujan.S.Shivappayanmath of B.Sc6th semester has satisfactorily completed the visit on **Water purification**of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

1). 12/9/23

2). 12/09/23

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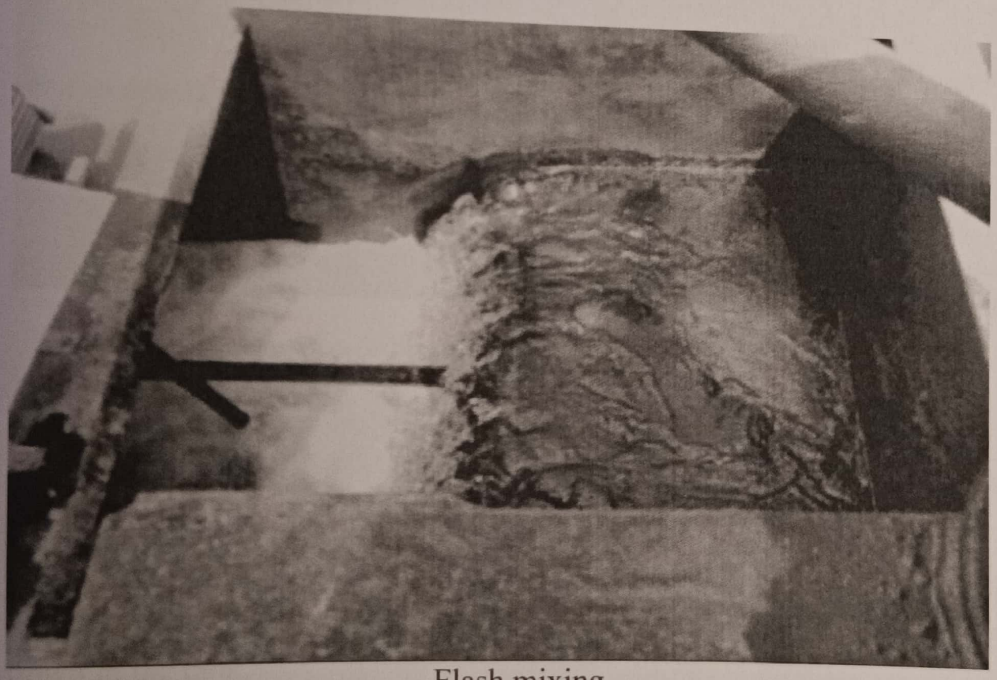

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Clariflocculator

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V.M.K.S.R.VASTRADARTS, SCIENCE, &

V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: 54 Examination seat No: S2041676

CERTIFICATE

This is to certify that ~~Mr.~~/Miss: Shweta S Patil of B.Sc 6th semester has satisfactorily completed the visit on **Water purification** of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner:

1). .....

2). .....

HOD Botany
Head of the Department
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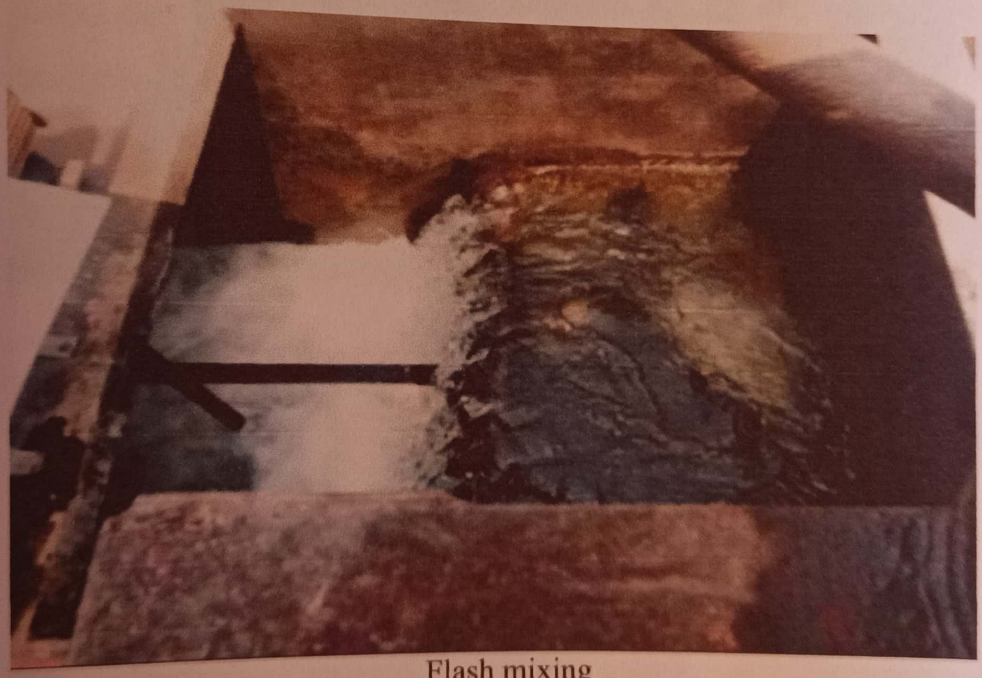

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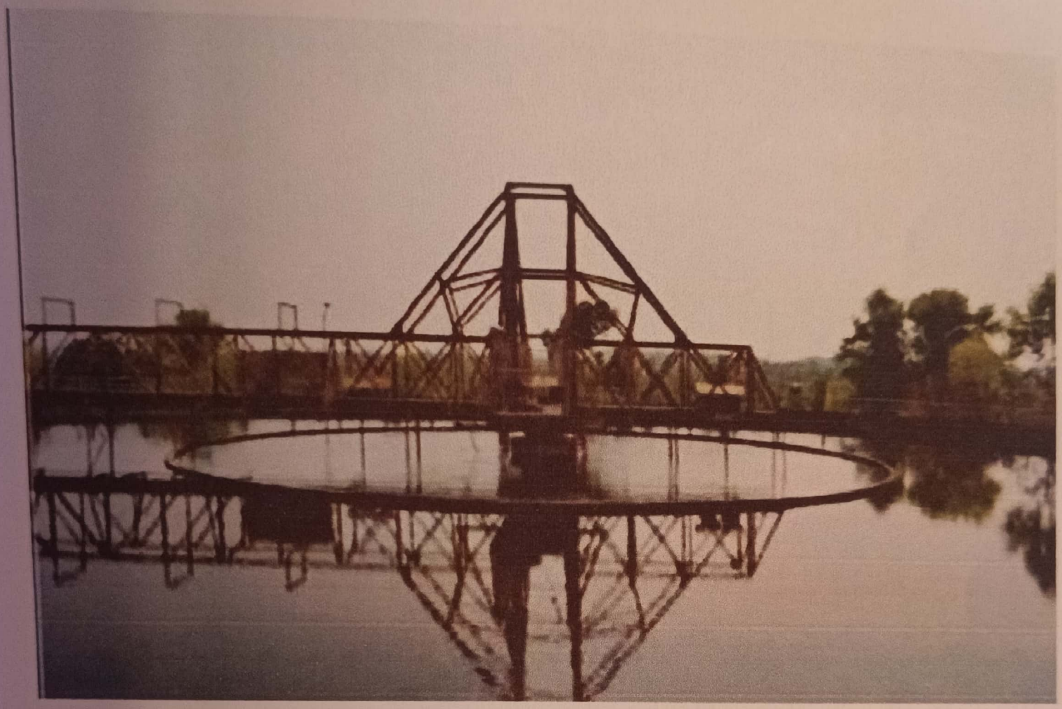

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V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: 68 Examination seat No: S2041677

CERTIFICATE

This is to certify that Mr./~~Miss~~: Siddalingesh.M. Tuginakai. of B.Sc6th semester has satisfactorily completed the visit on **Water purification**of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

1). 12/9/23

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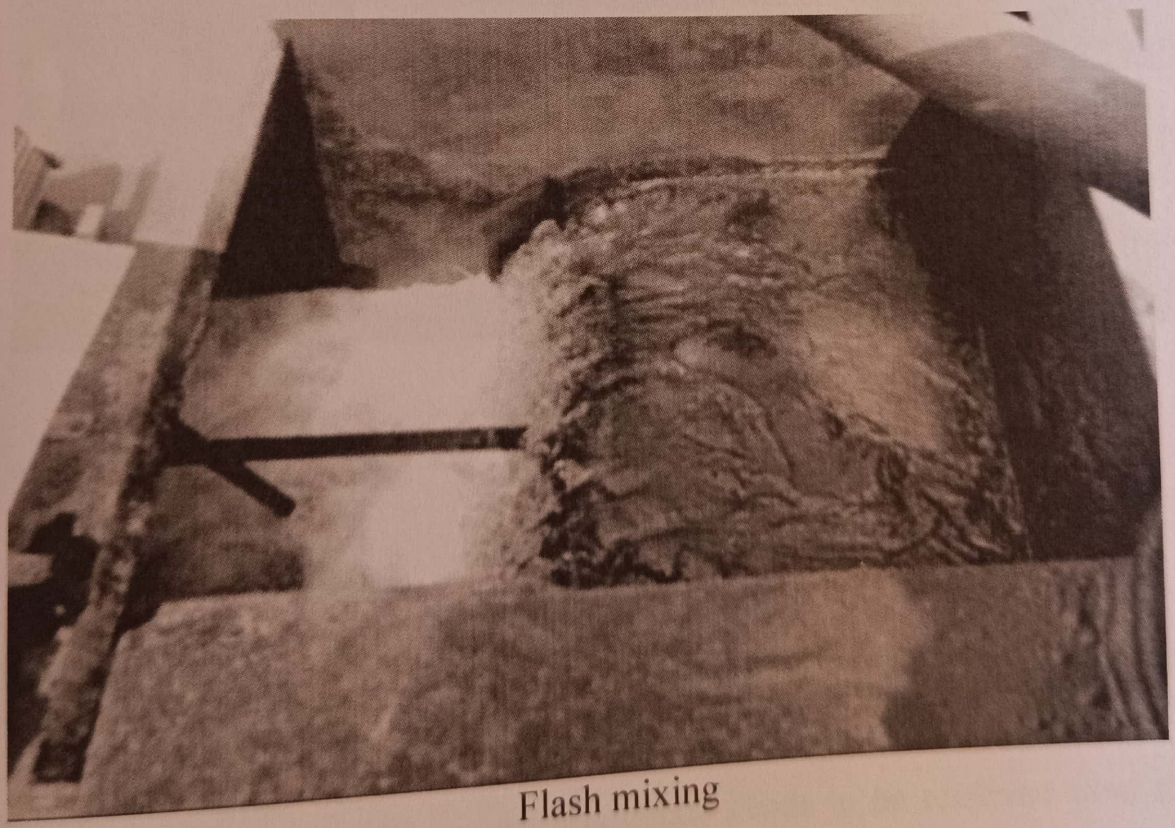

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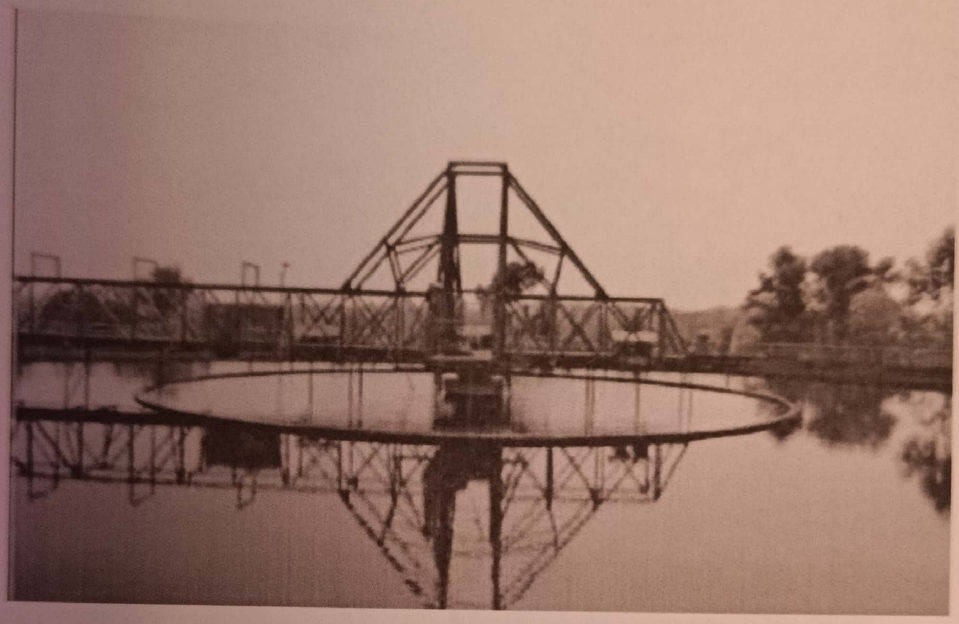

Clariflocculator

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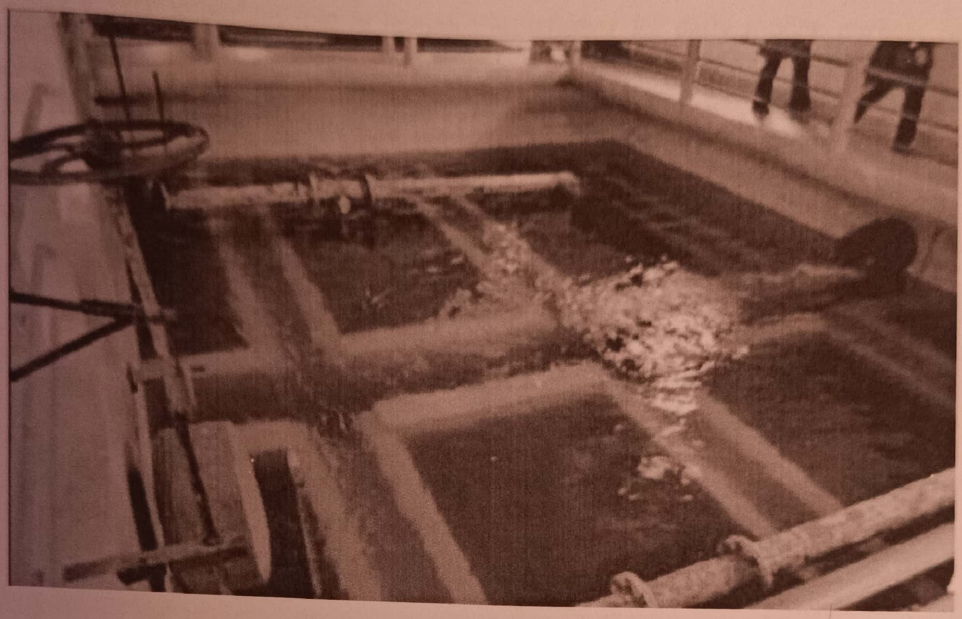

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PROJECTREPORT

College Roll No: 10 Examination seat No: S2041674

CERTIFICATE

This is to certify that Mr./Miss: Shivu Kalkutigara of B.Sc 6th semester has satisfactorily completed the visit on **Water purification** of Botany subject as prescribed by the Rani Chennammna University Belagavi.

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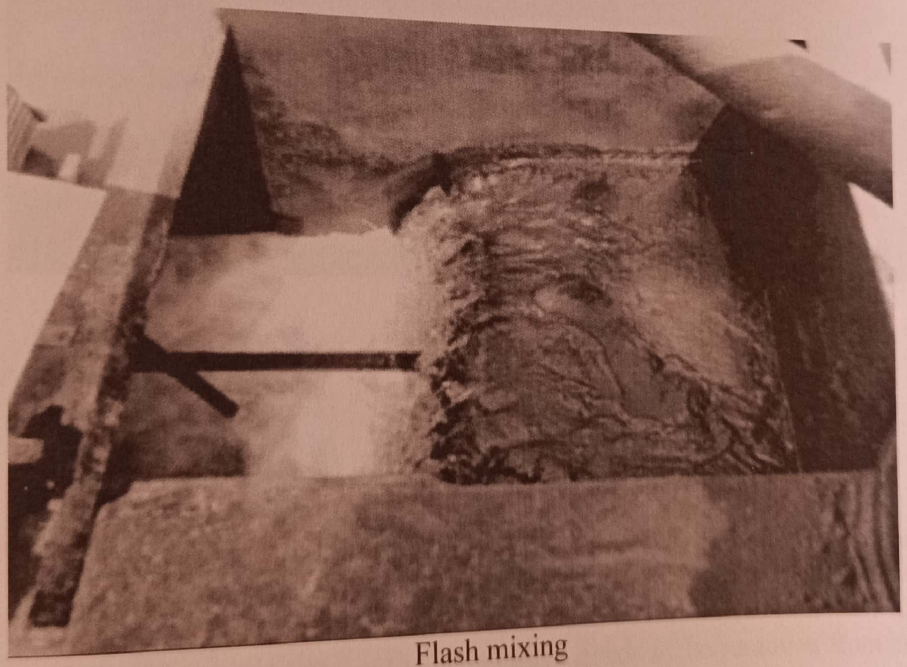
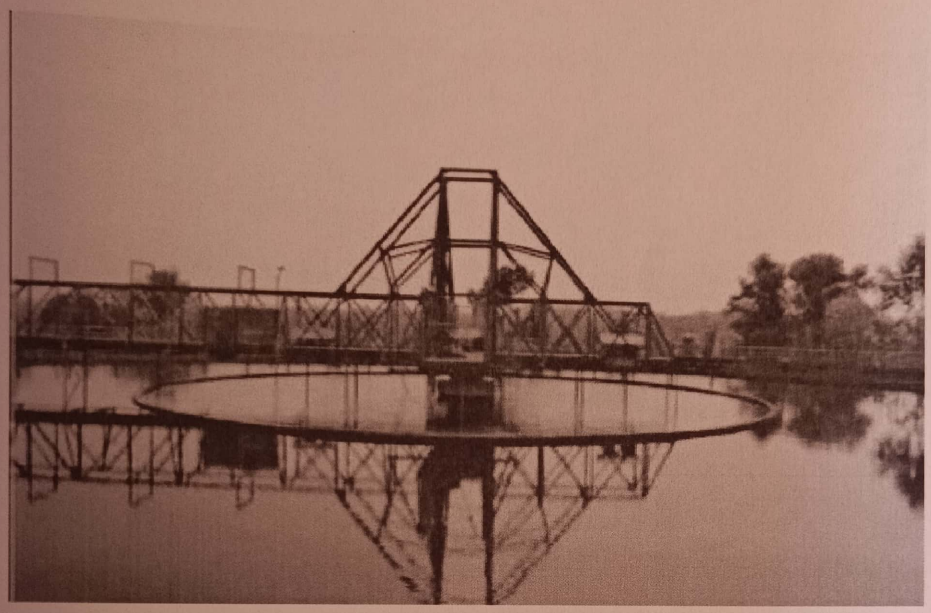


Flash mixing

iv. FLOCCULATION:-

This phase involves a slow and gentle stirring of the treated water in a flocculation chamber. The mechanized type of rotor is used. This causes the formation of thick copious white flocculent precipitate. The thicker the precipitate is, the higher is the settling velocity.



Clariflocculator

v. SEDIMENTATION:-

-The coagulated water is now lead into sedimentation tank where it is detained for 2-6 hrs when the flocculent precipitate together with impurities and bacteria settle down in the tank.

-At least 95% of the flocculent precipitate needs to be removed from the water before it is admitted to the rapid filters.

vi. FILTERATION:-

-Each filter unit has 6 sand beds – coarse pebble, fine pebble, coarse gravel, fine gravel, coarse sand, fine sand.

-The thickness of sand bed is 110 cm.

-The under drains at the bottom of the filter bed collects the filter water.

-Sandfilters getting dirty and beginning to lose efficiency approaching 7-8 feet needing, backwashing.

Sand filtration bed

vii. BACKWASHING :-

-As filter proceeds, the suspended impurities and bacteria clog the filters.
-The filter soon becomes dirty and begin to lose their efficiency and are subjected to backwashing.
-This is done by reversing the flow of water through the sand bed.
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viii. DISINFECTION :-

-This is the last step before storage and distribution of this water.
-The process used is **chlorination.**
-The chlorine gas is used for effective disinfection.

ix. RESERVOIR :-

-We have visited the reservoir where the purified water was stored.
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4. CONCLUSION

Water plays a very important role in human life, whether for daily routine purpose or human health. This field visit gave us the knowledge about the purification of water on large scale and made us aware about the quality of water since it may affect the human health especially. Also the trip made us realized that it is not easy to supply the water directly from the main supply to the people. Thus, thanks to the responsible party and the workers who invested in this project to ensure the health and convenience of the people in Aluva and Ernakulam and the faculties for planning this event smoothly.

V.M.K.S.R.VASTRADARTS, SCIENCE, &
V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: 22 Examination seat No: S2041663

CERTIFICATE

This is to certify that Mr./Miss: Sahana. Managuli of B.Sc 6th semester has satisfactorily completed the visit on **Water purification** of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

1). 11/9/23

2). 11/09/23

FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

REPORT

1. INTRODUCTION

VMSR VASTRAD COLLEGE DEPARTMENT OF SCIENCE organized a field visit to Water Treatment Plant, HUNGUND.

*On 22nd July 2023 About 80 students joined the visit under the guidance of faculty of science. There a one of working staff explained well about the structure and working of the water purification plant and offered us a visit to the concerned areas. Students got an excellent benefit by visiting the biggest water purification plant in hungund with a capacity of 17.80 M.L.D. and understand about the purification methods.

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*Before the water is distributed into the public houses, the water has to undergo the water treatment process such as follows: -

- Aeration are to eliminate unneeded dissolved gases such as (CO_2, H_2S,NH_3).
- It is also to increase DO level in water and remove DOC
- Coagulation is the removal of turbidity from the water.
- Turbidity is a cloudy appearance of water caused by small particles suspended therein. Water with little or no turbidity will clear.
- Flocculation is mixing process in which particles are brought into contact in order to promote their agglomeration
- Sedimentation is to remove suspended material from water by the action of gravity.
- Filtration is to remove suspended particles from water by passing the water through medium such as sand.
- Disinfection is to destroy pathogens within a practicable period of time.

- Water distribution is to satisfy the water requirements for a combination of domestic, commercial, industrial and fire-fighting purposes.

  After water passes or flowing through all distinctive features, it's collected into water tank and ready to be supply to houses area.

2. OBJECTIVE

The objectives of visiting the water treatment plant are:-

- To study the types of water treatment plant used.
- To study the process of water treatment.

3. WATER TREATMENT PROCESS

i. COLLECTION:-
The raw water which is supplied to the water treatment plant comes from periyar river.

ii. COAGULATION:-
The raw water is first treated with chemical coagulant alum. The dose of alum varies depending upon the turbidity, color, temperature & pH of the water.

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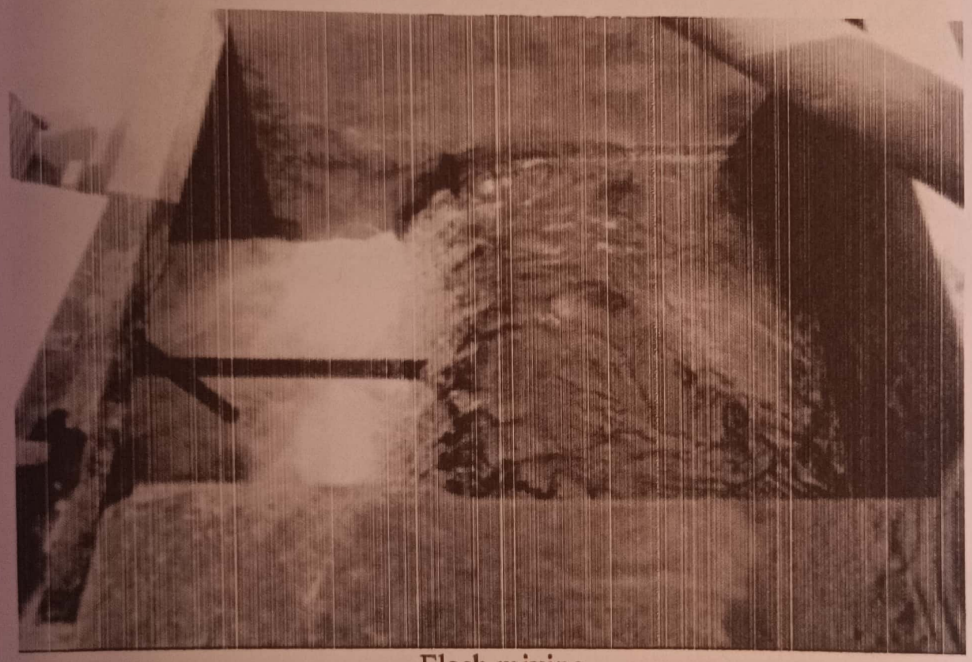

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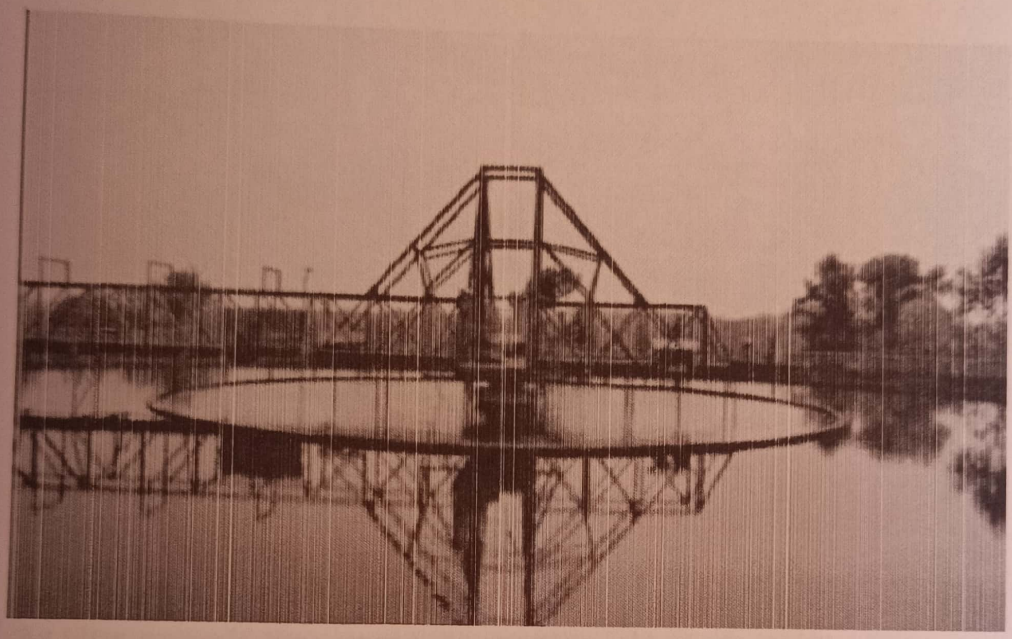

Clariflocculator

v. SEDIMENTATION:-

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-Each filter unit has 6 sand beds – coarse pebble, fine pebble, coarse gravel, fine gravel, coarse sand, fine sand.

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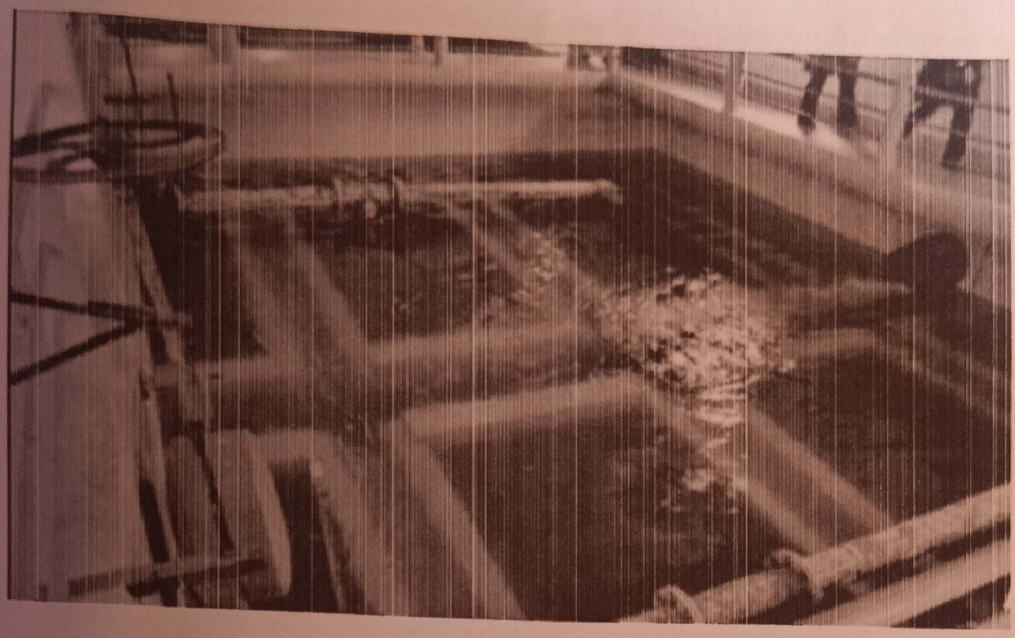

Sand filtration bed

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V.M.K.S.R.VASTRADARTS, SCIENCE,&
V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: 08 Examination seat No: S2041655

CERTIFICATE

This is to certify that Mr./Miss: Prashant. Aiholli of B.Sc 6th semester has satisfactorily completed the visit on **Water purification** of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

1). 12/9/23

2). 12/09/23

FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

REPORT

1. INTRODUCTION

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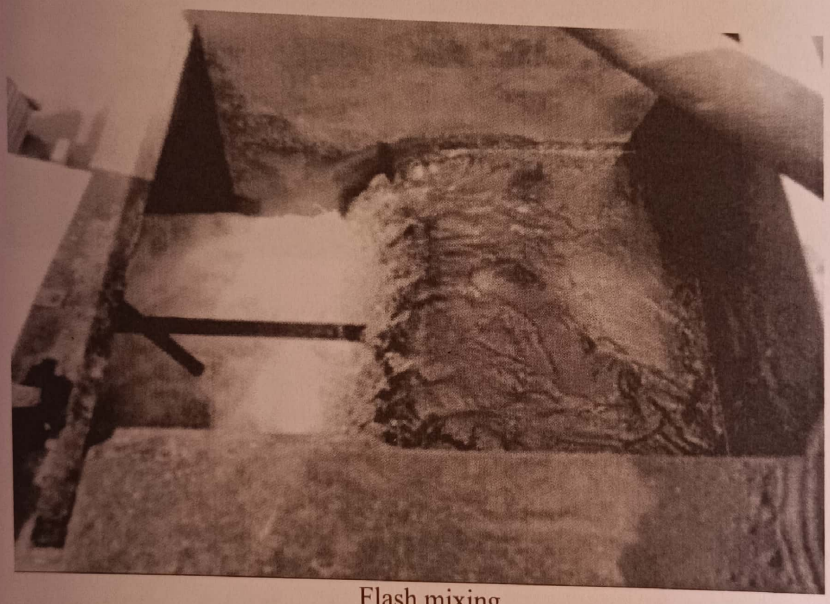

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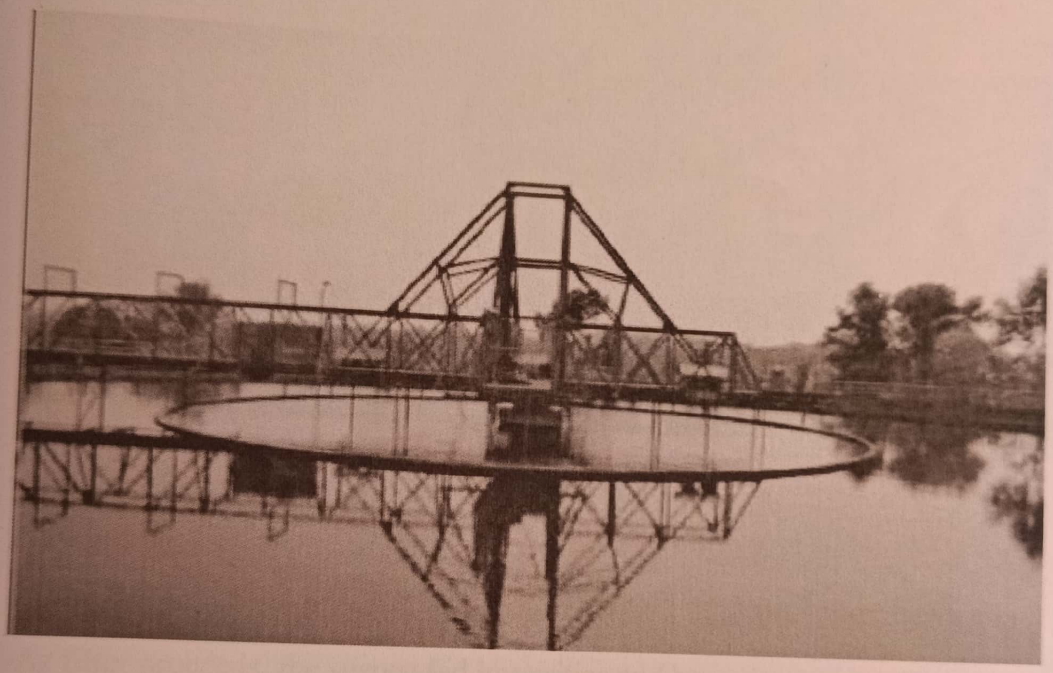

Clariflocculator

v. SEDIMENTATION:-

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V.M.K.S.R.VASTRADARTS, SCIENCE, &
V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: Examination seat No:

CERTIFICATE

This is to certify that Mr./Miss: Priyanka A. Hiremath. of B.Sc 6th semester has satisfactorily completed the visit on **Water purification** of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

1). 11.9.23

2). 11/09/23

FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

REPORT

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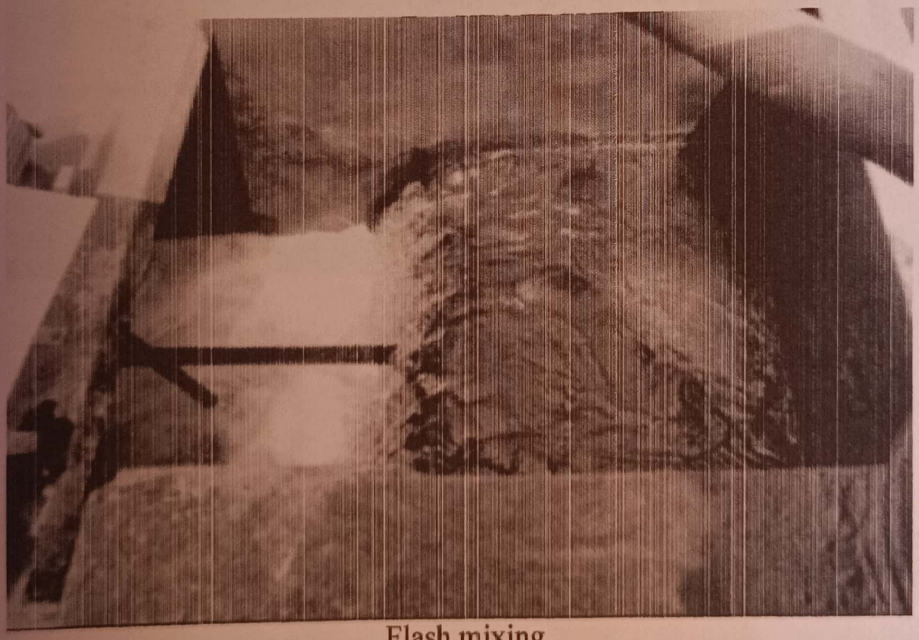

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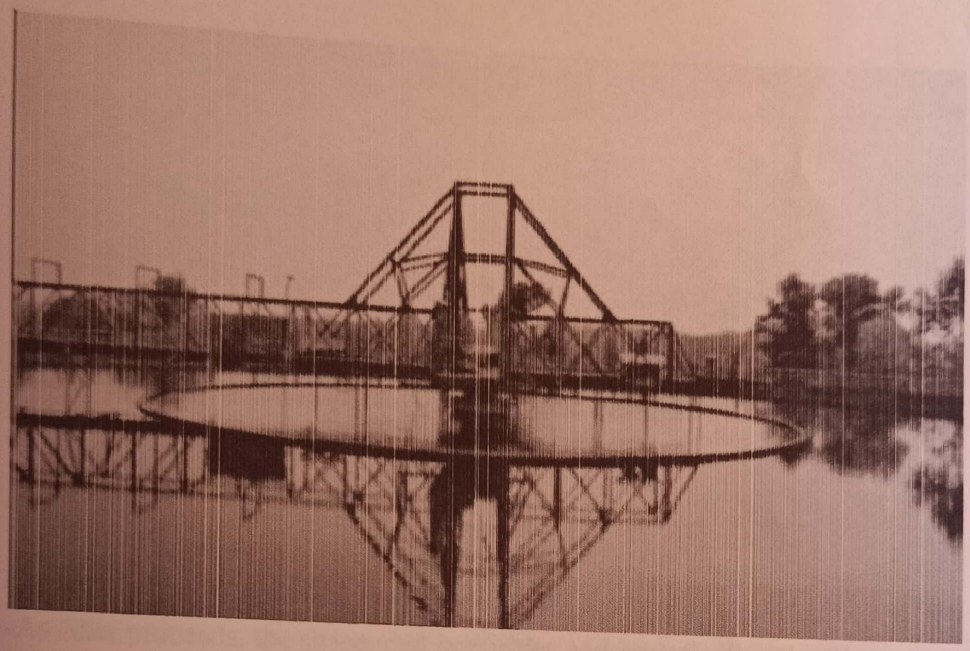

Clariflocculator

v. SEDIMENTATION:-

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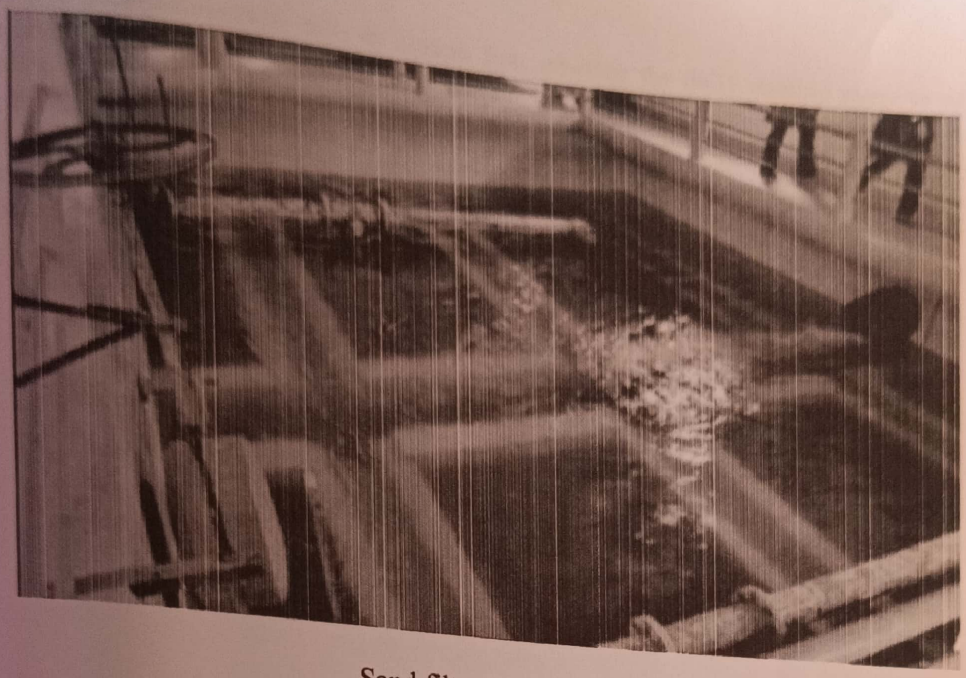

Sand filtration bed

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V.M.K.S.R.VASTRADARTS, SCIENCE,&
V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: 19 Examination seat No: 5204650

CERTIFICATE

This is to certify that Mr./Miss: POOJA.A.BALLARI of B.Sc 6th semester has satisfactorily completed the visit on **Water purification** of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

1). ..... 11/09/23.

2). 11/09/23

FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

REPORT

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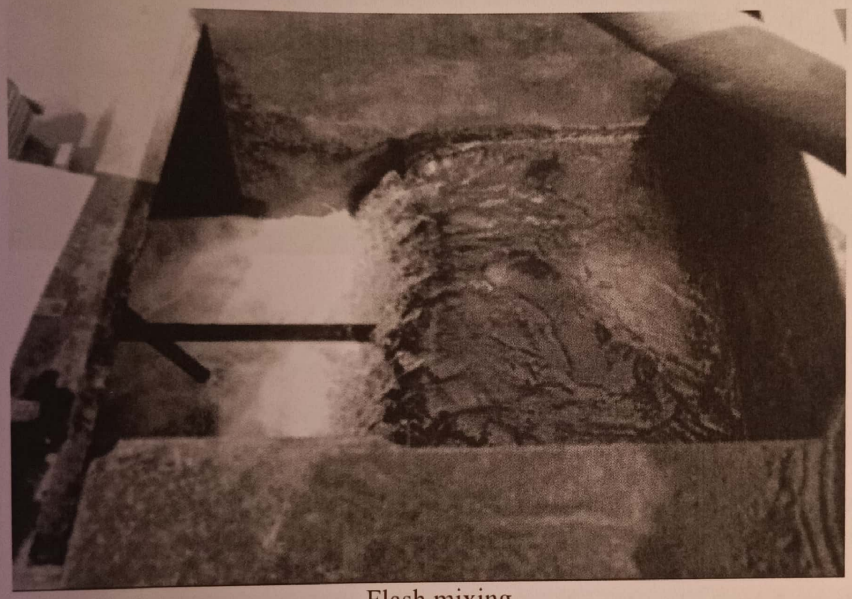

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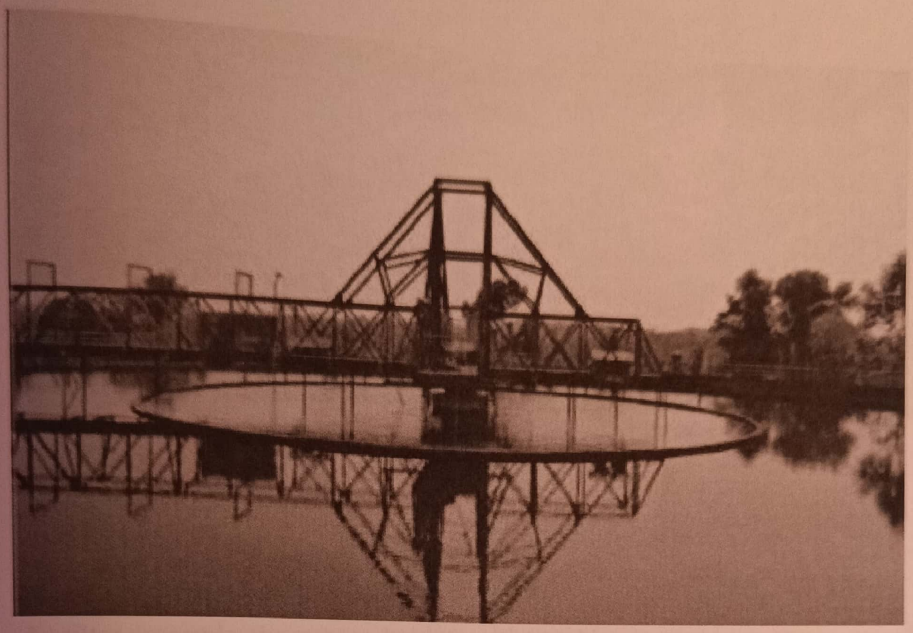

Clariflocculator

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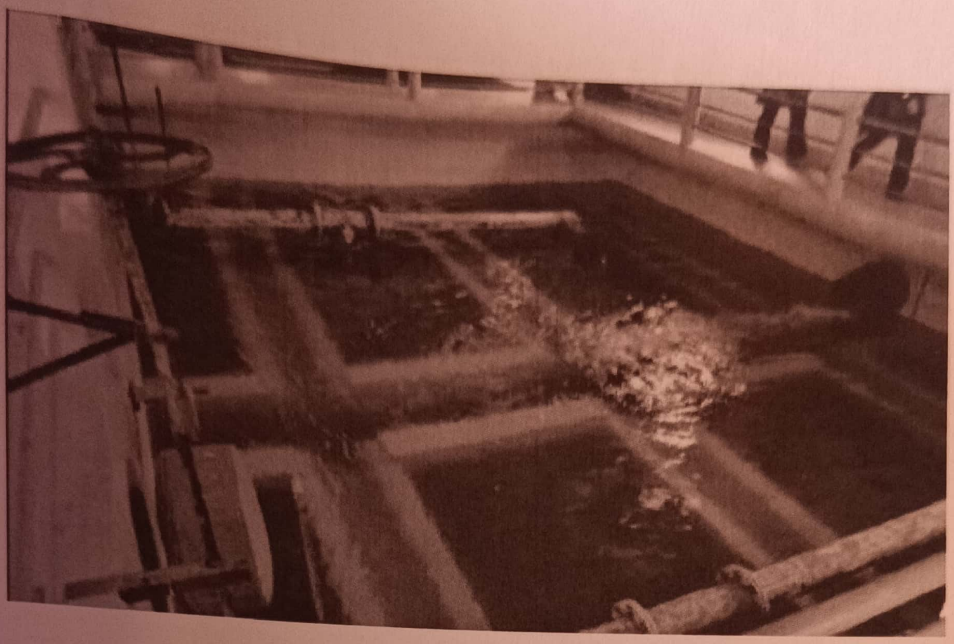

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V.M.K.S.R.VASTRADARTS, SCIENCE,&
V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: 65 Examination seat No: S2014645

CERTIFICATE

This is to certify that Mr./Miss: **Muskan Bhagawan** of B.Sc 6th semester has satisfactorily completed the visit on **Water purification**of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

Botany
Head of the Department
V.M.K.S.R Vastrad Arts,Commerce And Science College,Hungund Dist:Bagalkot

1). 4/9/23

2). 4/09/23

FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

REPORT

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- Flocculation is mixing process in which particles are brought into contact in order to promote their agglomeration
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- Disinfection is to destroy pathogens within a practicable period of time.

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The objectives of visiting the water treatment plant are:-

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- To study the process of water treatment.

3. WATER TREATMENT PROCESS

i. COLLECTION:-
The raw water which is supplied to the water treatment plant comes from periyar river.

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The raw water is first treated with chemical coagulant alum. The dose of alum varies depending upon the turbidity, color, temperature & pH of the water.

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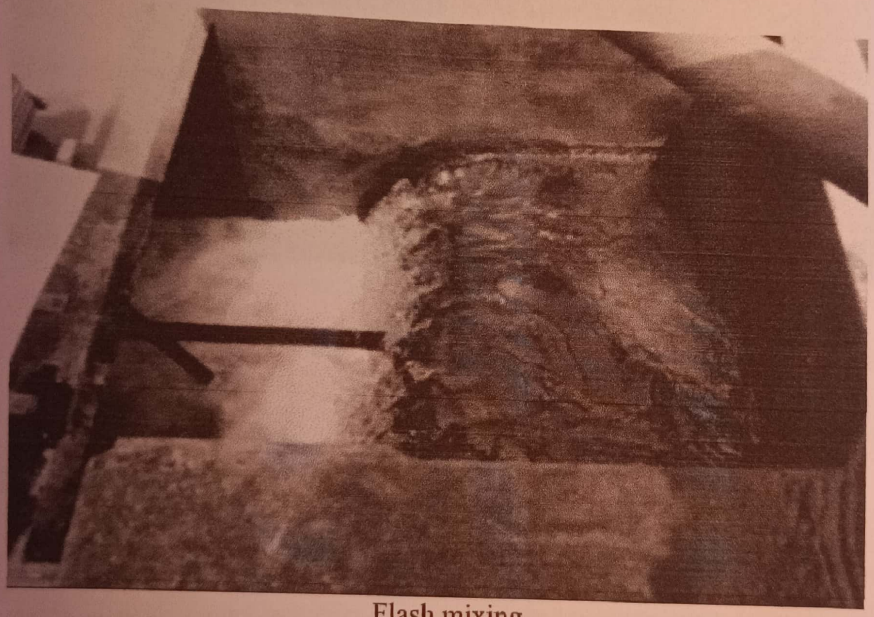

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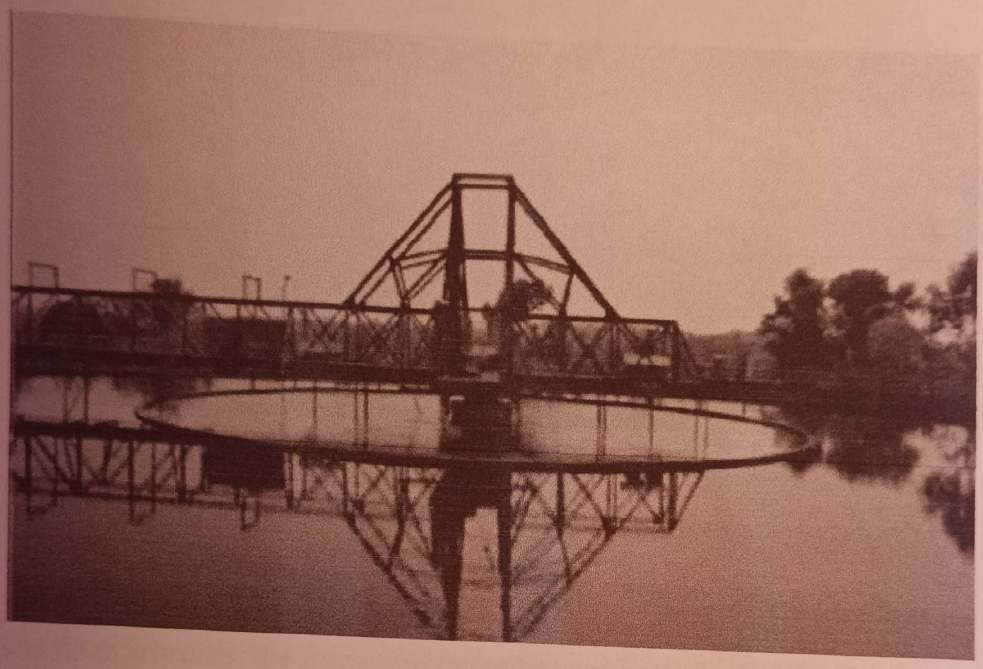
iv. FLOCCULATION:-

This phase involves a slow and gentle stirring of the treated water in a flocculation chamber. The mechanized type of rotor is used. This causes the formation of thick copious white flocculent precipitate. The thicker the precipitate is, the higher is the settling velocity.



Clariflocculator

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-The coagulated water is now lead into sedimentation tank where it is detained for 2-6 hrs when the flocculent precipitate together with impurities and bacteria settle down in the tank.

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vi. FILTERATION:-

-Each filter unit has 6 sand beds – coarse pebble, fine pebble, coarse gravel, fine gravel, coarse sand, fine sand.

-The thickness of sand bed is 110 cm.

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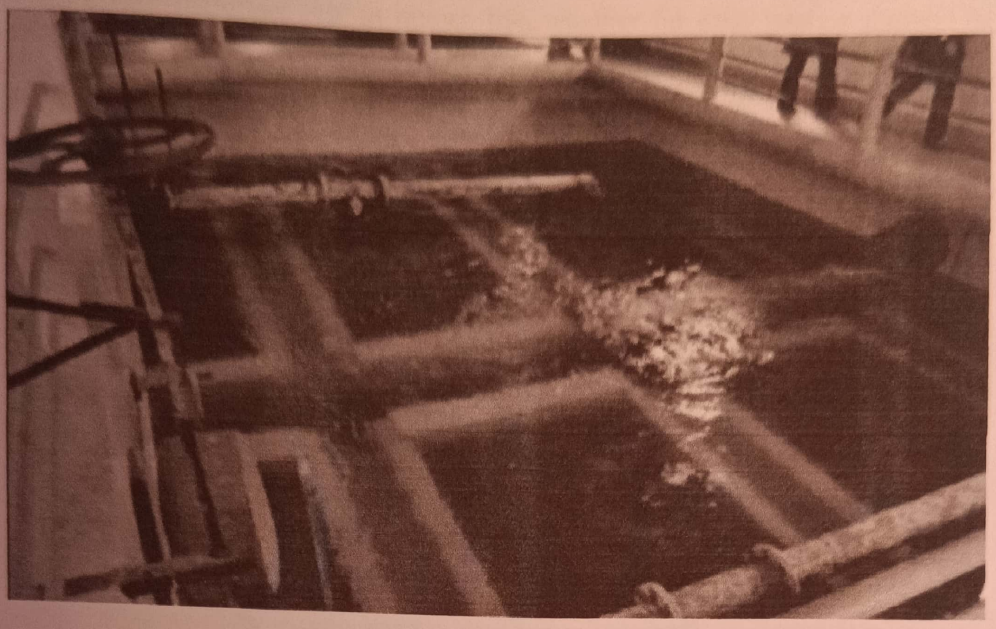
-Sandfilters getting dirty and beginning to lose efficiency approaching 7-8 feet needing, backwashing.



Sand filtration bed

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-This is the last step before storage and distribution of this water.
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-We have visited the reservoir where the purified water was stored.
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4. CONCLUSION

Water plays a very important role in human life, whether for daily routine purpose or human health. This field visit gave us the knowledge about the purification of water on large scale and made us aware about the quality of water since it may affect the human health especially. Also the trip made us realized that it is not easy to supply the water directly from the main supply to the people. Thus, thanks to the responsible party and the workers who invested in this project to ensure the health and convenience of the people in Aluva and Ernakulam and the faculties for planning this event smoothly.

V.M.K.S.R.VASTRADARTS, SCIENCE,&
V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: 17 Examination seat No: S2041641

CERTIFICATE

This is to certify that Mr./Miss: Manjula. R. Nandikeshwar of B.Sc 6th semester has satisfactorily completed the visit on ~~Vermicompost~~ Water Purification unit of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Botany
Head of the Department
V.M.K.S.R.Vastrad Arts,Commerce And Science College,Hungund Dist:Bagalkot

Examiner HOD

1). 4/12/23

2). 4/12/23

Manjula. R. Nandikeshwar
S2041641

FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

REPORT

1. INTRODUCTION

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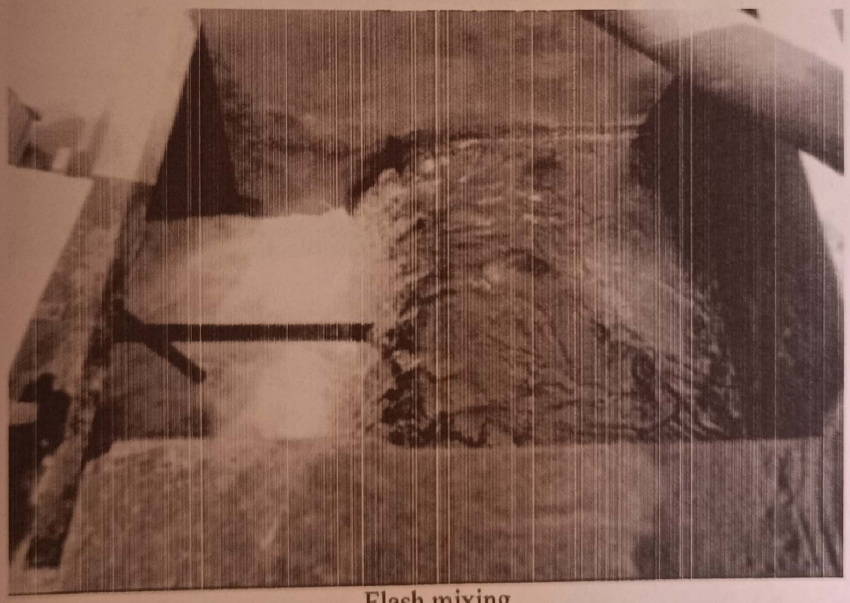

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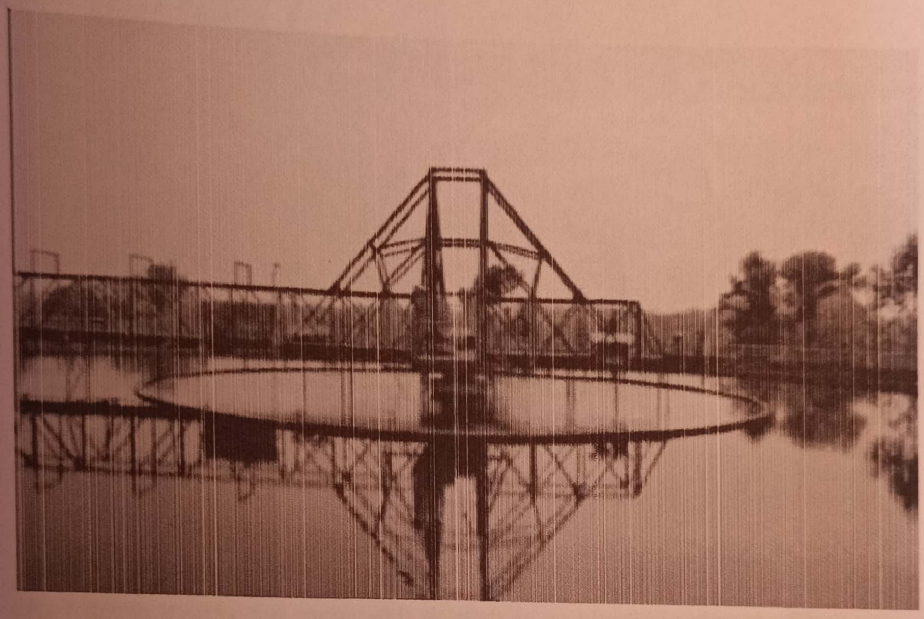

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V.M.K.S.R.VASTRADARTS, SCIENCE,&

V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: Examination seat No:

CERTIFICATE

This is to certify that Mr./Miss: Mahadevi P. K. Sadei of B.Sc6th semester has satisfactorily completed the visit on **Water purification**of Botany subject as prescribed by the Rani Chennammna University Belagavi.

Botany
Head of the Department
V.M.K.S.R Vastrad Arts, Commerce And
Science College Hungund

During year 2022-2023

Examiner: HOD

1). 4/9/23

2). 4/9/23

FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

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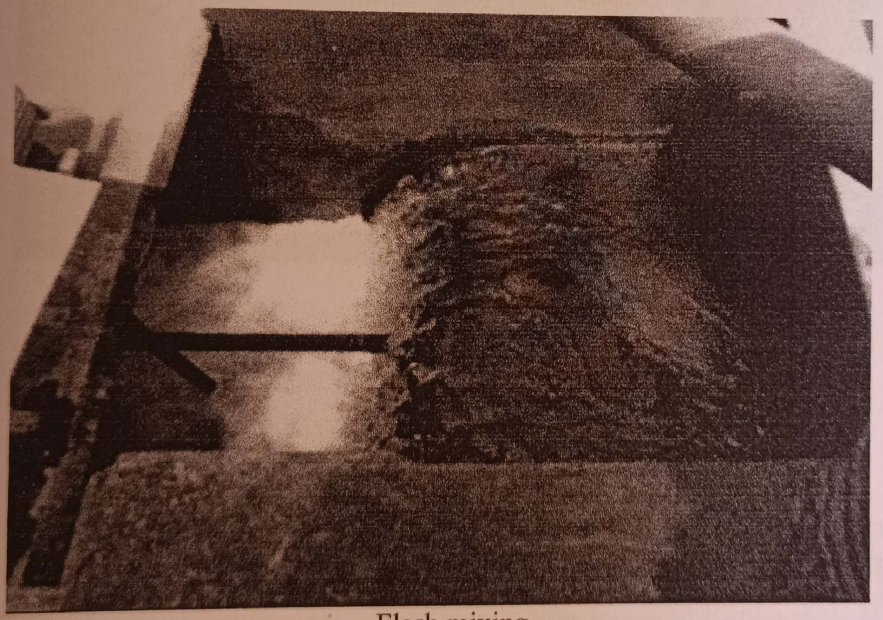

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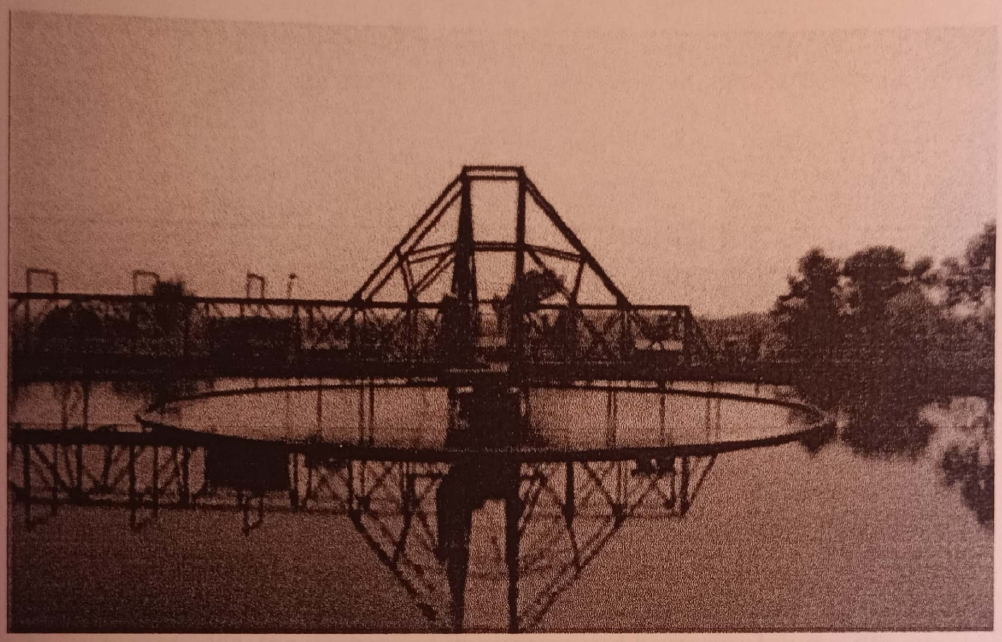

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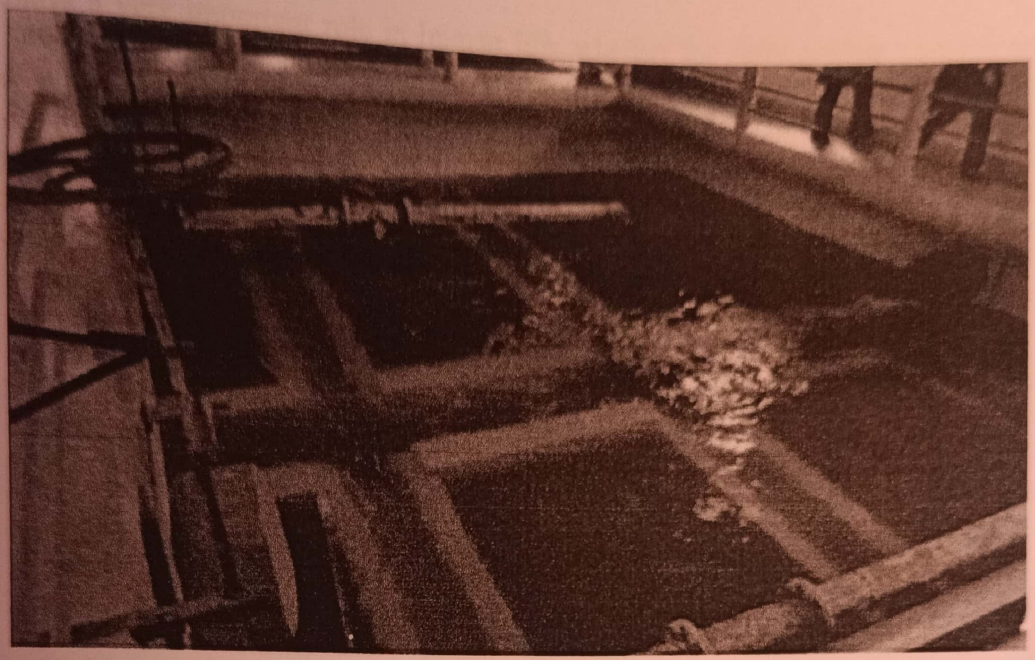

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V.M.K.S.R.VASTRADARTS, SCIENCE,&

V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECT REPORT

College Roll No:72 Examination seat No:S2041634

CERTIFICATE

This is to certify that Mr./Miss:**LAXMI .M. AMBALIKOPPA** of B.Sc 6th semester has satisfactorily completed the visit on **Water purification** of Botany subject as prescribed by the Rani Chennammma University Belagavi.

Botany
Head of the Department
V.M.K.S.R Vastrad Arts, Commerce And
Science College, Hungund Dist:Bagalkot

During year 2022-2023

Examiner: HOD

1). 11/9/23

2). 11/9/23

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HUNGUND

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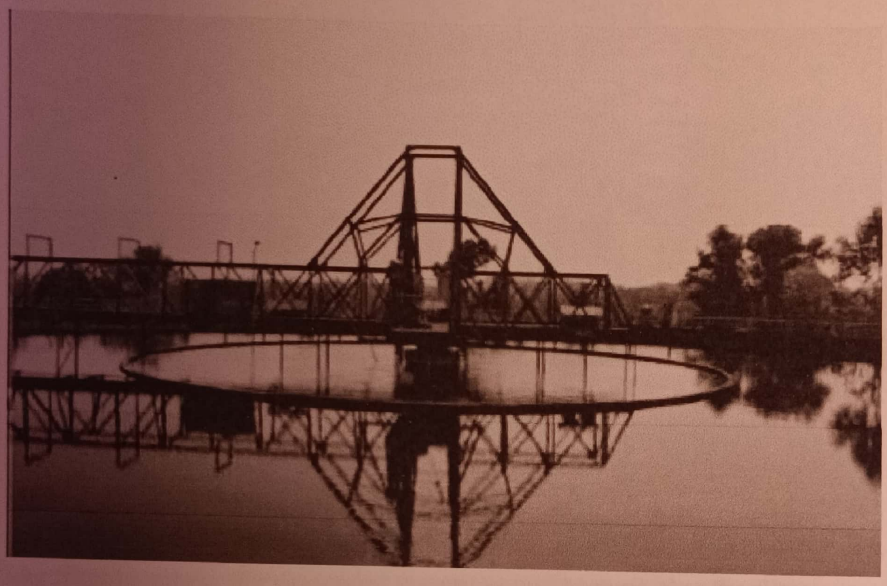

Clariflocculator

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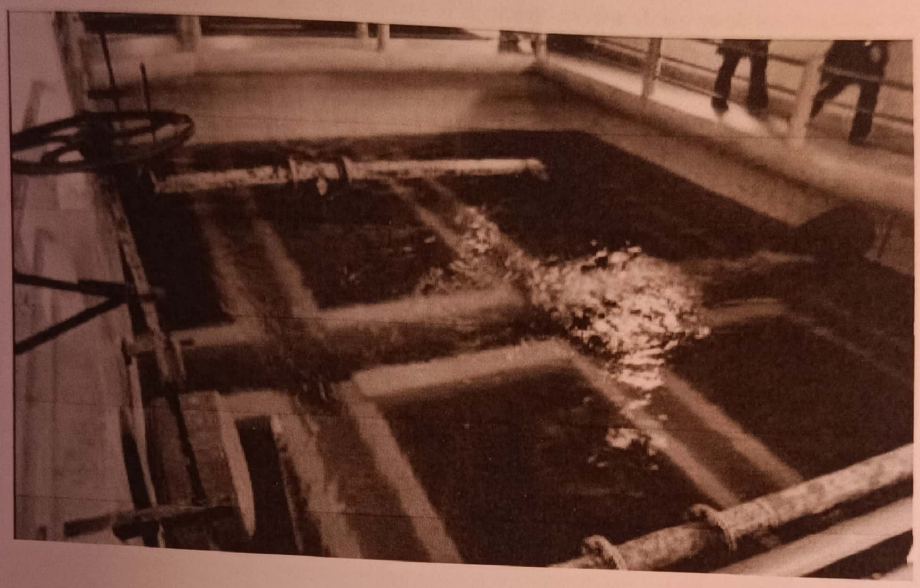

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V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: Examination seat No:

CERTIFICATE

This is to certify that Mr./Miss: K. Aishwarya of B.Sc6th semester has satisfactorily completed the visit on **Water purification**of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

1). Rolpal 11/9/23

2). Hulleeff 11/9/23

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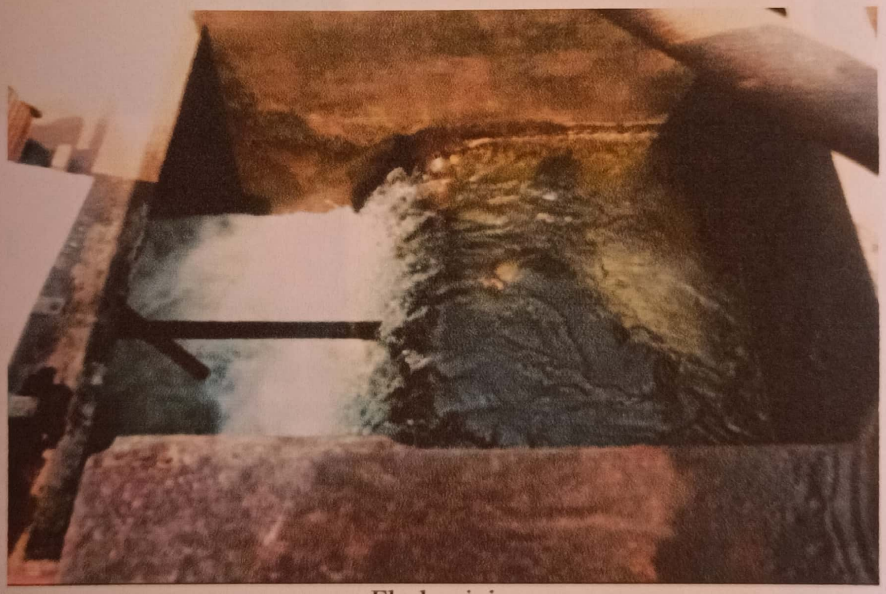

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V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: 12 Examination seat No: S2041625

CERTIFICATE

This is to certify that Mr./~~Miss:~~ Jadidhar Benoor of B.Sc 6th semester has satisfactorily completed the visit on **Water purification** of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

1). 11/9/23

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FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

REPORT

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2. OBJECTIVE

The objectives of visiting the water treatment plant are:-

- To study the types of water treatment plant used.
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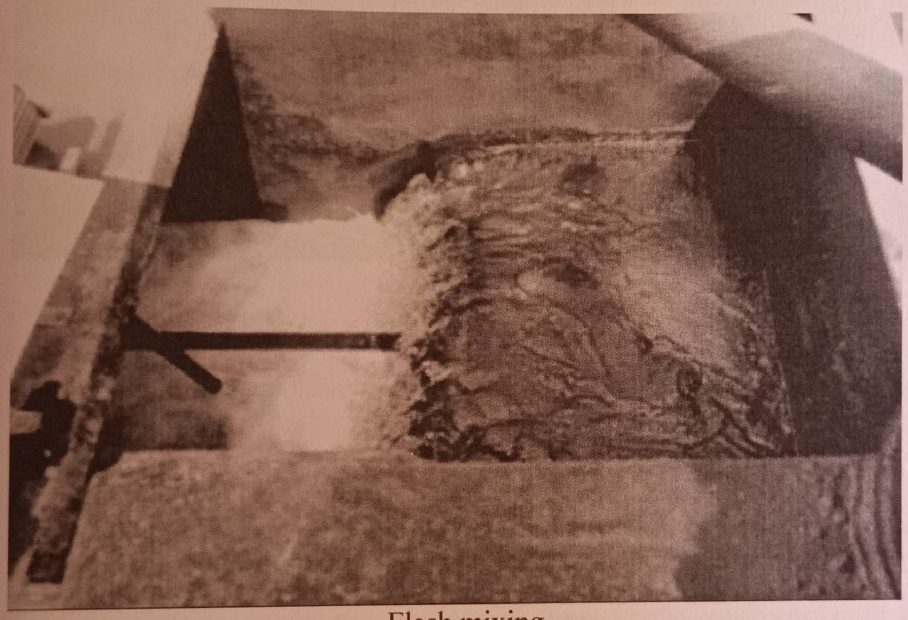
3. WATER TREATMENT PROCESS

i. COLLECTION:-
The raw water which is supplied to the water treatment plant comes from periyar river.

ii. COAGULATION:-
The raw water is first treated with chemical coagulant alum. The dose of alum varies depending upon the turbidity, color, temperature & pH of the water.

iii. FLASH MIXING:-
Treated water is then subjected to violent agitation in a mixing chamber for a few minutes. This allows quick and rapid dissemination of alum throughout the bulk of the water.



Flash mixing

iv. FLOCCULATION:-

This phase involves a slow and gentle stirring of the treated water in a flocculation chamber. The mechanized type of rotor is used. This causes the formation of thick copious white flocculent precipitate. The thicker the precipitate is, the higher is the settling velocity.

Clariflocculator

v. SEDIMENTATION:-

-The coagulated water is now lead into sedimentation tank where it is detained for 2-6 hrs when the flocculent precipitate together with impurities and bacteria settle down in the tank.

-At least 95% of the flocculent precipitate needs to be removed from the water before it is admitted to the rapid filters.

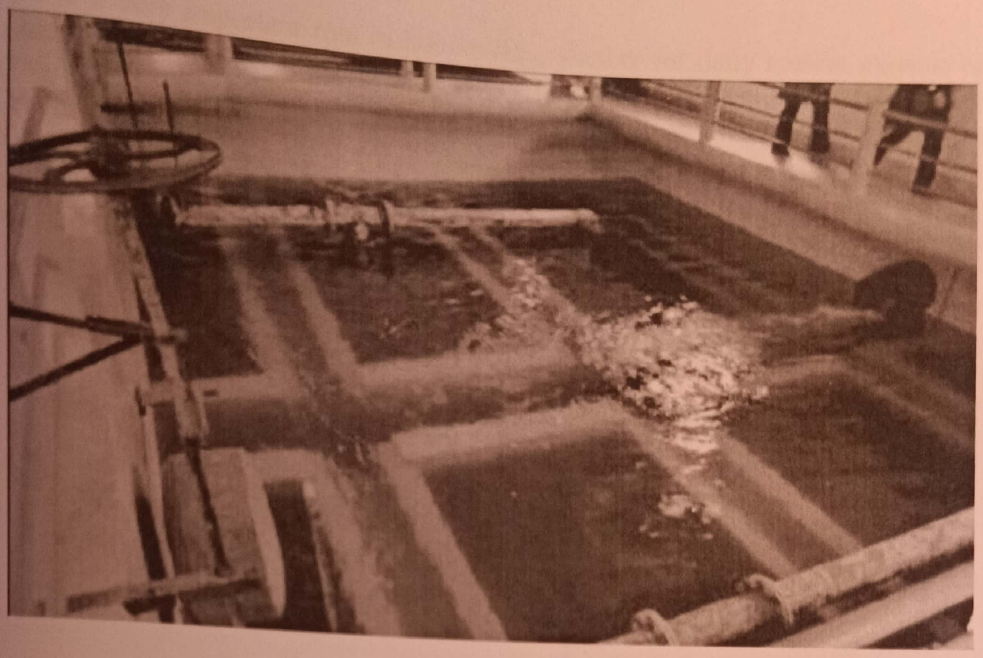
vi. FILTERATION:-

-Each filter unit has 6 sand beds – coarse pebble, fine pebble, coarse gravel, fine gravel, coarse sand, fine sand.

-The thickness of sand bed is 110 cm.

-The under drains at the bottom of the filter bed collects the filter water.

-Sandfilters getting dirty and beginning to lose efficiency approaching 7-8 feet needing, backwashing.



Sand filtration bed

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-As filter proceeds, the suspended impurities and bacteria clog the filters.
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-This is the last step before storage and distribution of this water.
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-We have visited the reservoir where the purified water was stored.
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Water plays a very important role in human life, whether for daily routine purpose or human health. This field visit gave us the knowledge about the purification of water on large scale and made us aware about the quality of water since it may affect the human health especially. Also the trip made us realized that it is not easy to supply the water directly from the main supply to the people. Thus, thanks to the responsible party and the workers who invested in this project to ensure the health and convenience of the people in Aluva and Ernakulam and the faculties for planning this event smoothly.

V.M.K.S.R.VASTRADARTS, SCIENCE,&
V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: 18 Examination seat No: S2041615

CERTIFICATE

This is to certify that Mr./~~Miss~~: BASAVARAJ TEGGI of B.Sc6th semester has satisfactorily completed the visit on **Water purification**of Botany subject as prescribed by the Rani Chennammna University Belagavi.

Botany
Head of the Department
V.M.K.S.R Vastrad Arts, Commerce And
Science College, Hungund Dist:B.

During year 2022-2023

Examiner HOD

1). 12/9/23

2). 11/9/23

FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

REPORT

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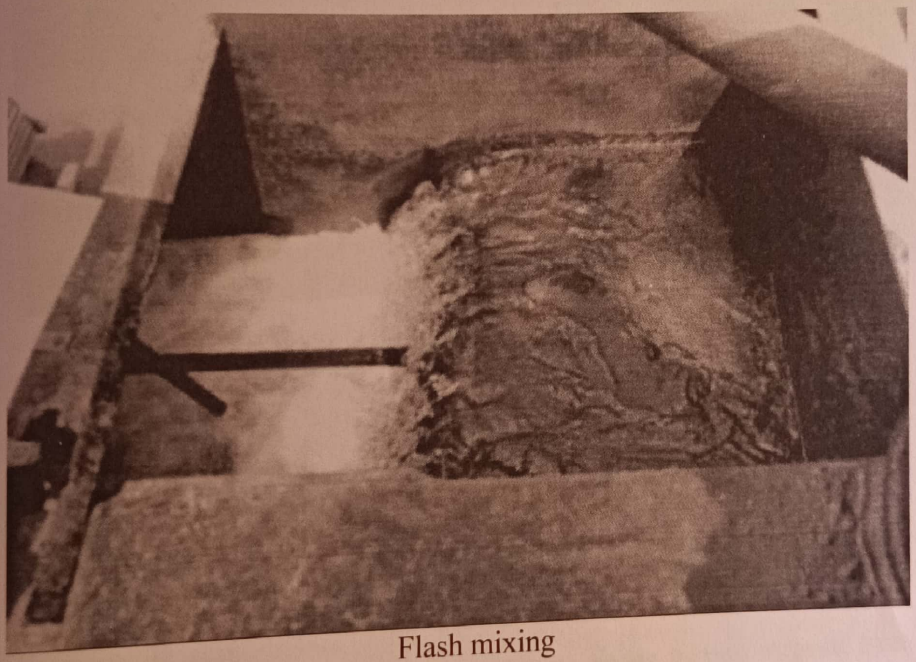

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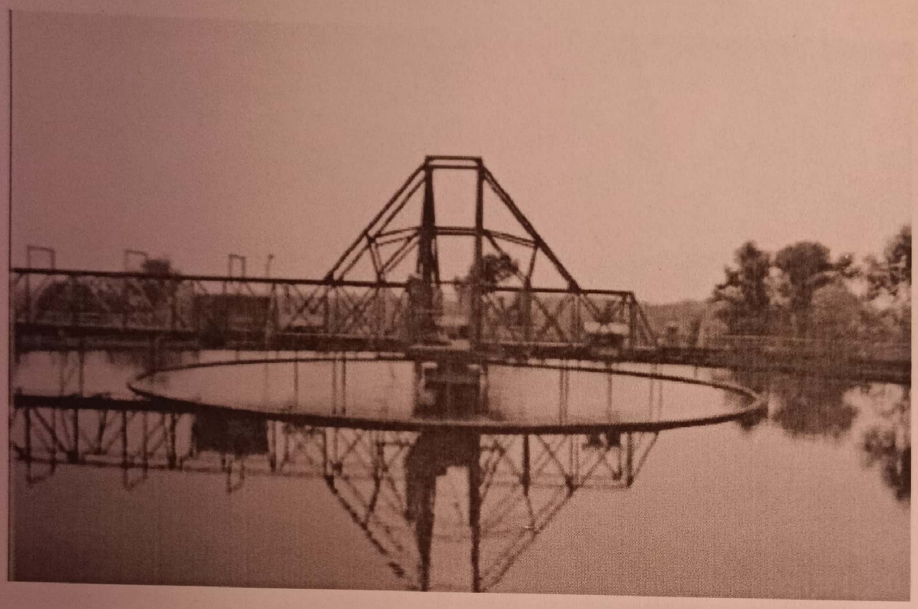

Clariflocculator

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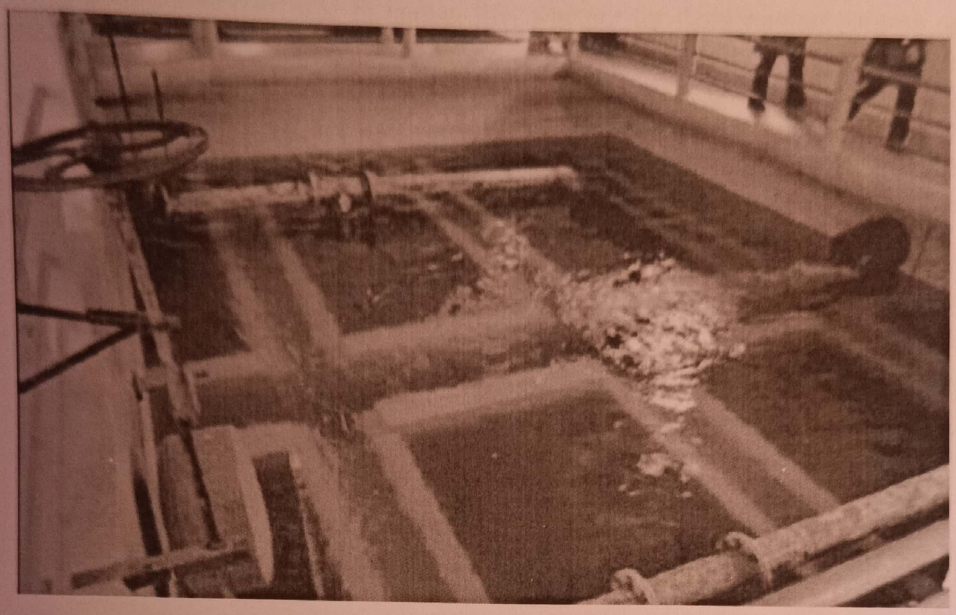

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V.M.K.S.R.VASTRADARTS, SCIENCE,&

V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: Examination seat No:

CERTIFICATE

This is to certify that Mr./Miss: Ashwini I Hiremath of B.Sc6th semester has satisfactorily completed the visit on **Water purification**of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

1). Rolpol 11/9/23

2). 11/9/23

FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

REPORT

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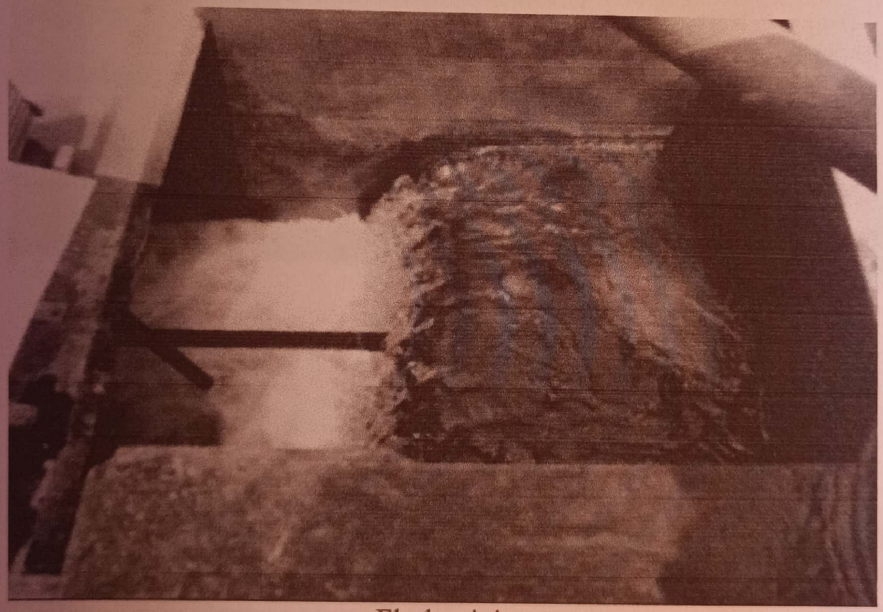

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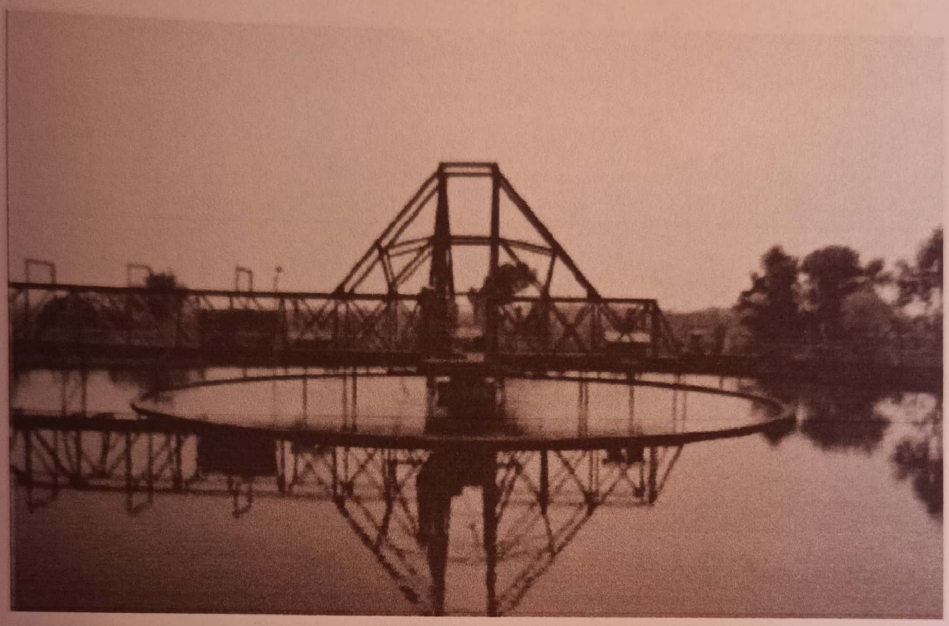

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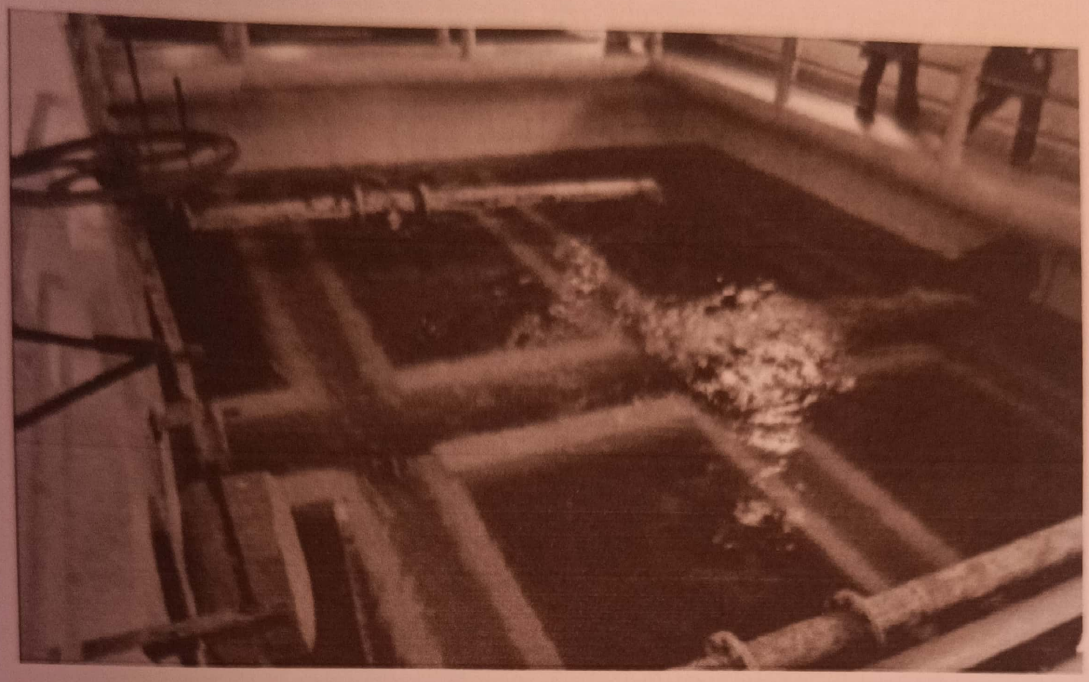

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V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: Examination seat No:

CERTIFICATE

This is to certify that ~~Mr~~./Miss: Arsheen Naaz of B.Sc 6th semester has satisfactorily completed the visit on **Water purification** of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

1). 11.9.23

2). 11/9/23

Botany
Head of the Department
V.M.K.S.R Vastrad Arts, Commerce And Science College, Hungund Dist: Bagalkot

FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

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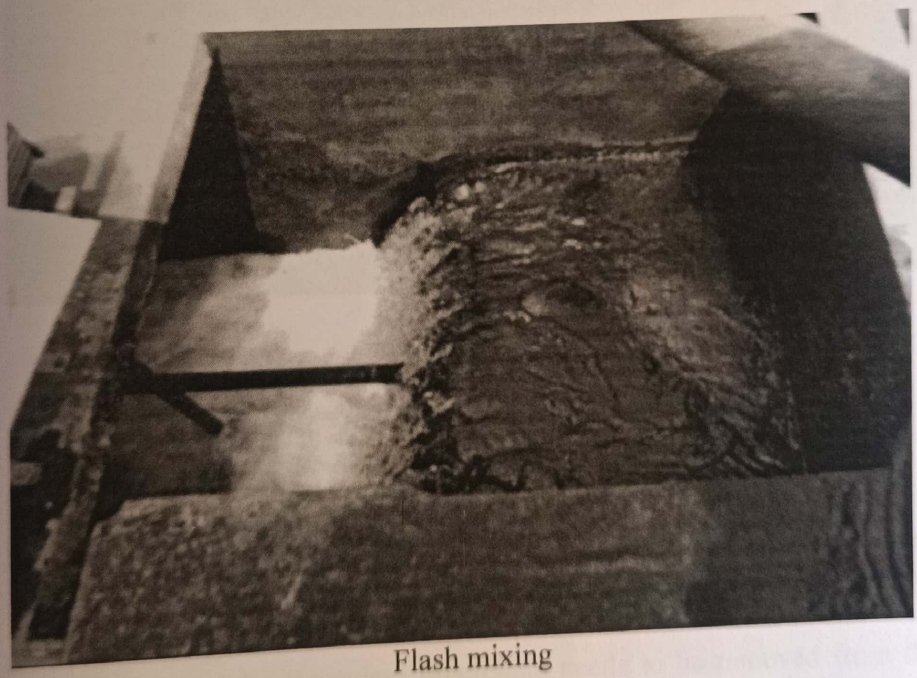

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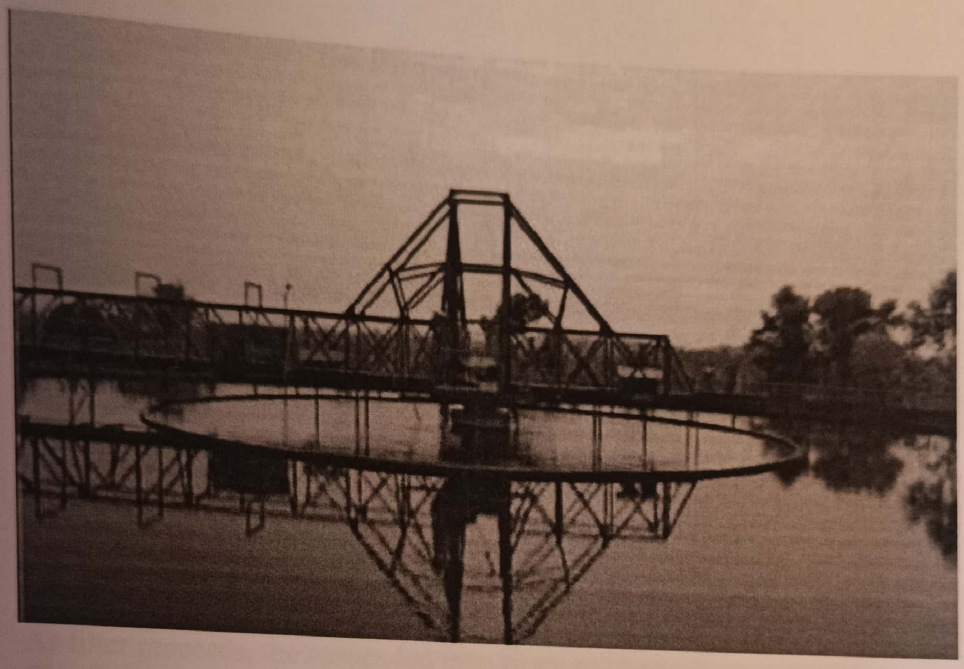

Clariflocculator

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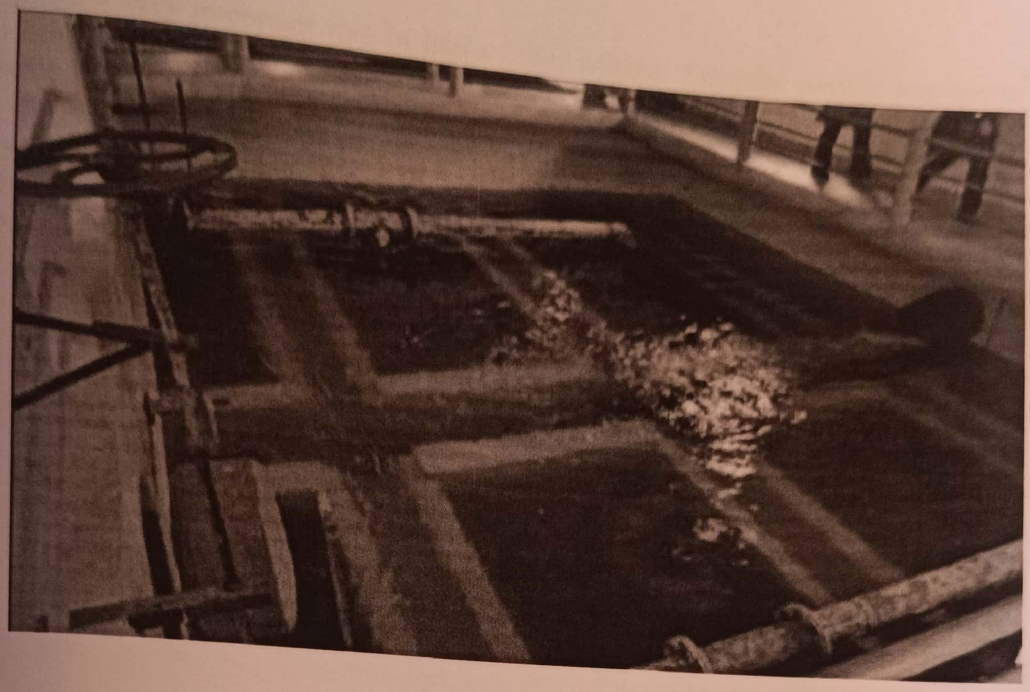

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PROJECTREPORT

College Roll No: 60 Examination seat No: S2041608

CERTIFICATE

This is to certify that Mr./Miss: ARJUN, CHOORI of B.Sc 6th semester has satisfactorily completed the visit on **Water purification** of Botany subject as prescribed by the Rani Chennammna University Belagavi.

Botany
Head of the Department
V.M.K.S.R Vastrad Arts, Commerce And Science College, Hungund Dist: Bagalkot

During year 2022-2023

Examiner: HOD

1). 11.9.23

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FIELD VISIT TO WATER TREATMENT PLANT

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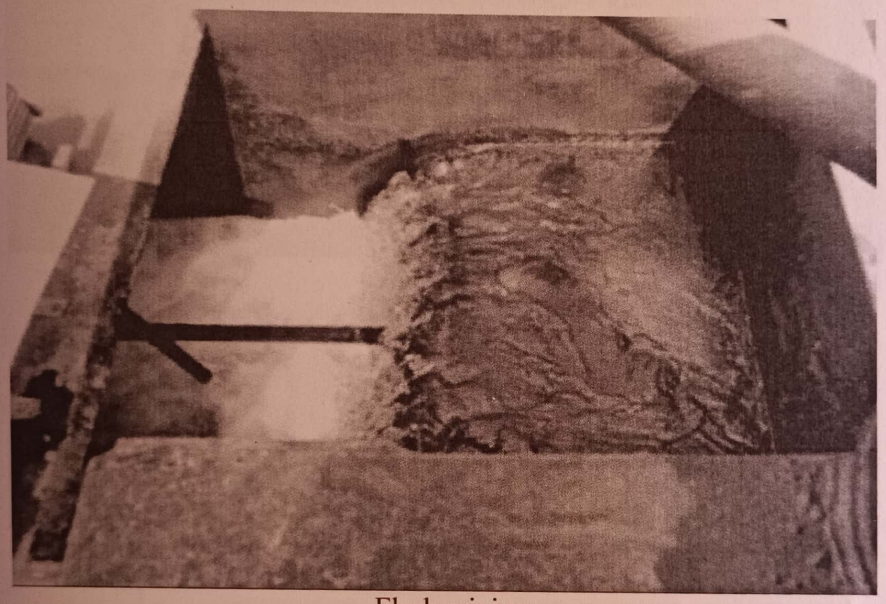

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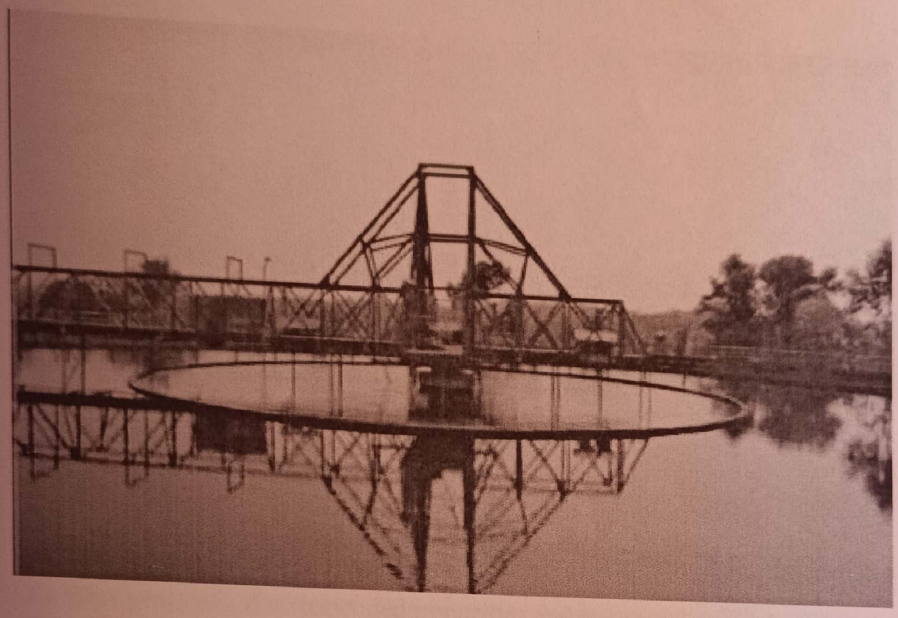

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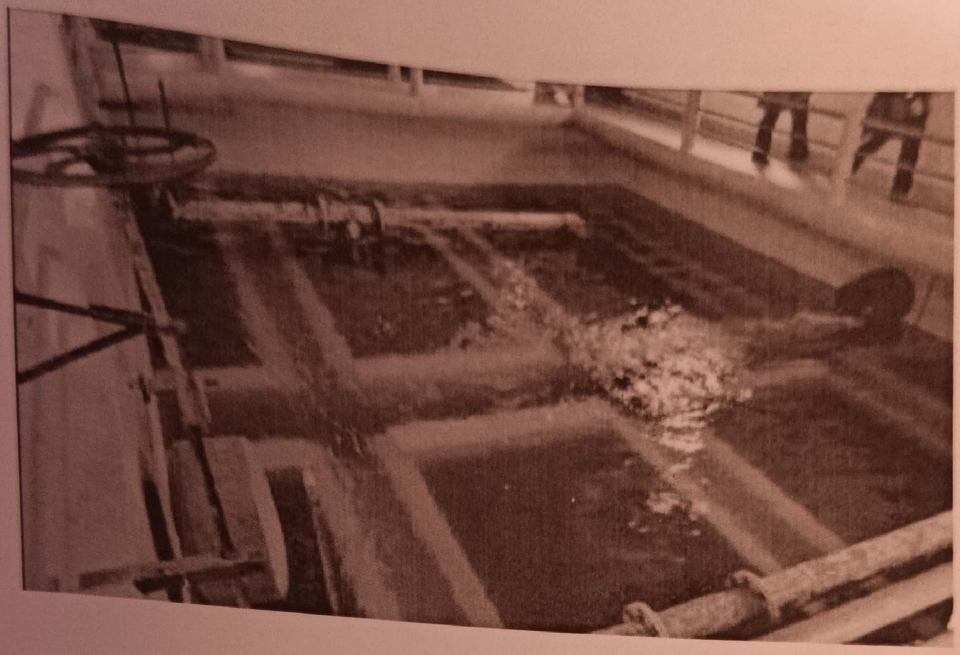
-Each filter unit has 6 sand beds – coarse pebble, fine pebble, coarse gravel, fine gravel, coarse sand, fine sand.

-The thickness of sand bed is 110 cm.

-The under drains at the bottom of the filter bed collects the filter water.

-Sandfilters getting dirty and beginning to lose efficiency approaching 7-8 feet needing, backwashing.



Sand filtration bed

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viii. DISINFECTION :-

-This is the last step before storage and distribution of this water.
-The process used is **chlorination.**
-The chlorine gas is used for effective disinfection.

ix. RESERVOIR :-

-We have visited the reservoir where the purified water was stored.
-From there it was supplied to various parts of Ernakulam and Aluva.

4. CONCLUSION

Water plays a very important role in human life, whether for daily routine purpose or human health. This field visit gave us the knowledge about the purification of water on large scale and made us aware about the quality of water since it may affect the human health especially. Also the trip made us realized that it is not easy to supply the water directly from the main supply to the people. Thus, thanks to the responsible party and the workers who invested in this project to ensure the health and convenience of the people in Aluva and Ernakulam and the faculties for planning this event smoothly.

V.M.K.S.R.VASTRADARTS, SCIENCE,&

V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: 11 Examination seat No: S2041603

CERTIFICATE

This is to certify that Mr./Miss: Ajay Hurakodli of B.Sc 6th semester has satisfactorily completed the visit on **Water purification** of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

1). 12/9/23

2). 12/9/23

- Water distribution is to satisfy the water requirements for a combination of domestic, commercial, industrial and fire-fighting purposes.

  After water passes or flowing through all distinctive features, it's collected into water tank and ready to be supply to houses area.

2. OBJECTIVE

The objectives of visiting the water treatment plant are:-

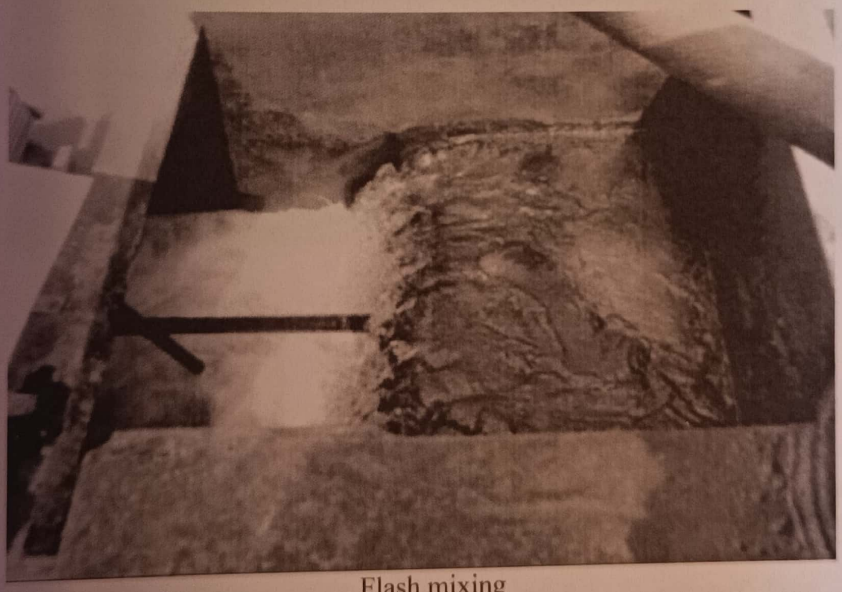
- To study the types of water treatment plant used.
- To study the process of water treatment.

3. WATER TREATMENT PROCESS

i. COLLECTION:-
The raw water which is supplied to the water treatment plant comes from periyar river.

ii. COAGULATION:-
The raw water is first treated with chemical coagulant alum. The dose of alum varies depending upon the turbidity, color, temperature & pH of the water.

iii. FLASH MIXING:-
Treated water is then subjected to violent agitation in a mixing chamber for a few minutes. This allows quick and rapid dissemination of alum throughout the bulk of the water.



Flash mixing

iv. FLOCCULATION:-
This phase involves a slow and gentle stirring of the treated water in a flocculation chamber. The mechanized type of rotor is used. This causes the formation of thick copious white flocculent precipitate. The thicker the precipitate is, the higher is the settling velocity.

Clariflocculator

v. SEDIMENTATION:-
-The coagulated water is now lead into sedimentation tank where it is detained for 2-6 hrs when the flocculent precipitate together with impurities and bacteria settle down in the tank.
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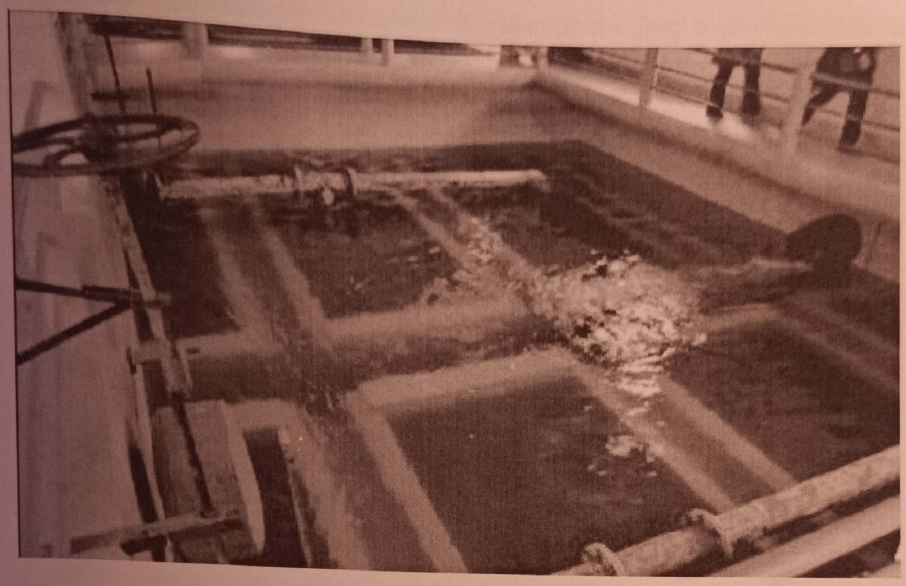

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V.M.K.S.R.VASTRADARTS, SCIENCE,&
V.S.BELLIHAL COMMERCE COLLEGE HUNGUND.

PROJECTREPORT

College Roll No: 53

Examination seat No: S2041601

CERTIFICATE

This is to certify that Mr./Miss: **Afreenbanu Tegginamani** of B.Sc 6th semester has satisfactorily completed the visit on **Water purification**of Botany subject as prescribed by the Rani Chennammna University Belagavi.

During year 2022-2023

Examiner: HOD

1). ..... 11/9/23...

2). 11/9/23

Botany
Head of the Department
V.M.K.S.R Vastrad Arts,Commerce And
Science College,Hungund Dist:Bagalkot

FIELD VISIT TO WATER TREATMENT PLANT

HUNGUND

REPORT

1. INTRODUCTION

VMSR VASTRAD COLLEGE DEPARTMENT OF SCIENCE organized a field visit to Water Treatment Plant, HUNGUND.

*On 22nd July 2023 About 80 students joined the visit under the guidance of faculty of science. There a one of working staff explained well about the structure and working of the water purification plant and offered us a visit to the concerned areas. Students got an excellent benefit by visiting the biggest water purification plant in hungund with a capacity of 17.80 M.L.D. and understand about the purification methods.

*Water treatment is whereby the used water or raw water from the river is treated in process to make the water more acceptable for a desired end-used. The goal of water treatment is to remove existing contaminants in the water, or reduce the concentration of such contaminants so the water becomes fit for its desired end-used. The process involved in treating water is solids separation using physical process and chemical process.

*Before the water is distributed into the public houses, the water has to undergo the water treatment process such as follows: -

- Aeration are to eliminate unneeded dissolved gases such as (CO_2, H_2S,NH_3).
- It is also to increase DO level in water and remove DOC
- Coagulation is the removal of turbidity from the water.
- Turbidity is a cloudy appearance of water caused by small particles suspended therein. Water with little or no turbidity will clear.
- Flocculation is mixing process in which particles are brought into contact in order to promote their agglomeration
- Sedimentation is to remove suspended material from water by the action of gravity.
- Filtration is to remove suspended particles from water by passing the water through medium such as sand.
- Disinfection is to destroy pathogens within a practicable period of time.

- Water distribution is to satisfy the water requirements for a combination of domestic, commercial, industrial and fire-fighting purposes.

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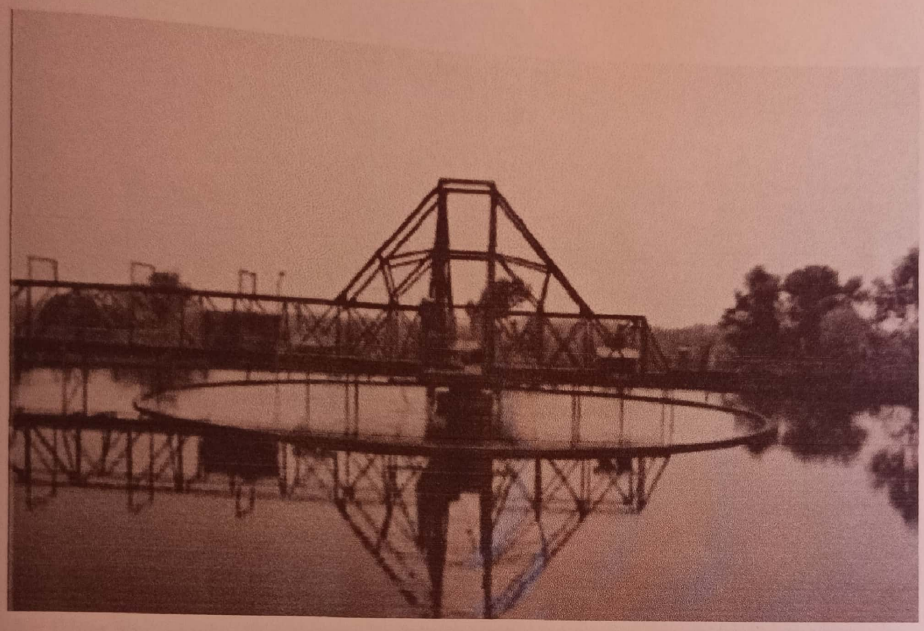

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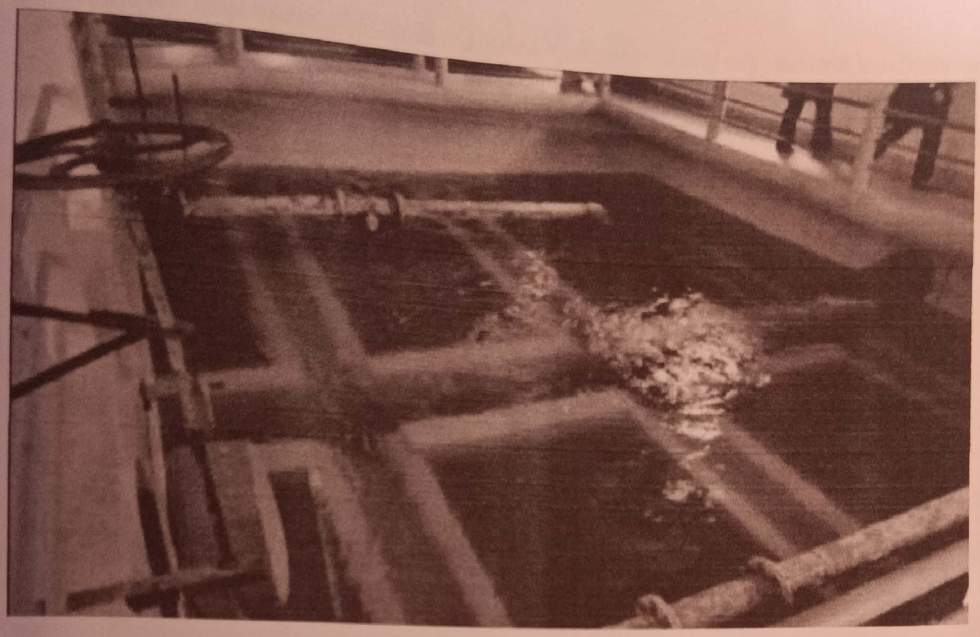

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